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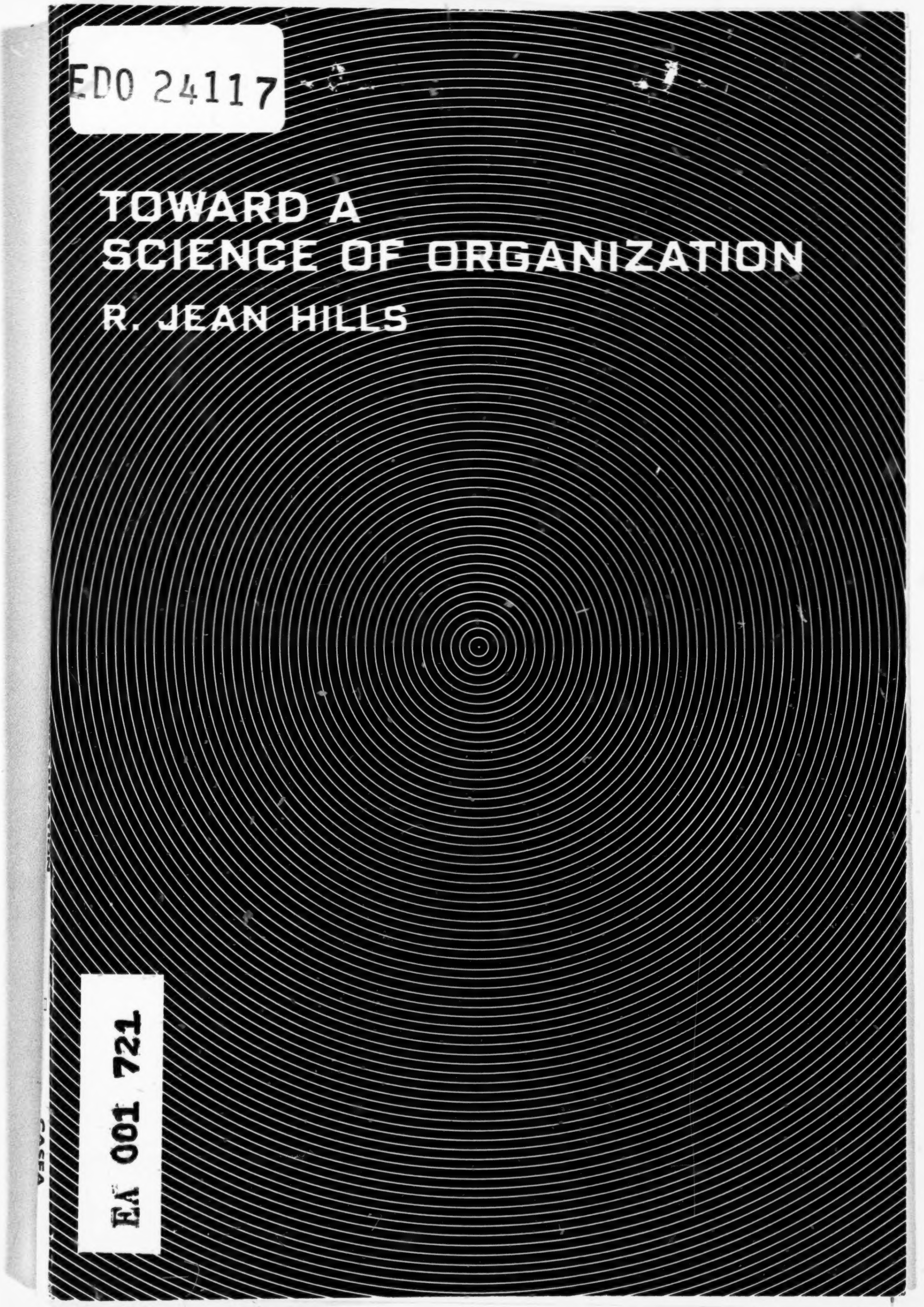
Major elements of the theory of social behavior formulated by Talcott Parsons are applied to a study of organization. The organizational model developed is based on Parsons' four functional imperatives of goal attainment, adaptation, integration, and pattern maintenance. Organizations are regarded as social systems distinguished by different arrangements of the same structural elements, as determined by the values of the particular organization or system. Special attention is given to the classification of organizations and to external and internal problems of organization. Applications of the model are made to organization in education and to the relationship of organization to educational innovation. (JK)



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R. JEAN HILLS

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TOWARD A SCIENCE OF ORGANIZATION

R. JEAN HILLS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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The editorial skill of Joanne Kitchel is only partly evident in the monograph itself. It would be fully evident if one compared the finished product with the typescript submitted to her. Similarly, the cryptographic and typing skill of Myrtle Feiereisen would be evident if one could compare the original manuscript with the typescript.

Given the nature of this study, it would in one sense, be superfluous to acknowledge my indebtedness to Talcott Parsons. Obviously, the theory presented is his whether the manner of presentation is by direct quotation or by transformation into my words. What is not obvious, and what should be acknowledged, is the fact that Parsons' phraseology has been used more than the footnotes and direct quotations would indicate. Numerous passages are only slightly paraphrased to avoid excessive use of lengthy direct quotations while preserving what seemed the best possible explication.

R. Jean Hills

University of Oregon, Eugene, Oregon
September, 1968

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Introduction

Although the actual writing of this document was accomplished in a matter of months, the study which made its completion possible has extended over a period of six years. The work was begun during a year spent at the University of Chicago in a quasi-faculty capacity immediately following the completion of graduate study. More was done during two years spent at Cornell University, and still more during the past three years at the University of Oregon. Although in none of the institutions named did associates share my conviction concerning the utility of the enterprise, it must be recorded that in each case there was sufficient tolerance for what must certainly have appeared to be sheer stubbornness, to permit me to bring it to the present stage of development.

This study assembles, from a wide variety of sources, the major elements of the theory of social behavior of Talcott Parsons, and makes tentative applications of that theory in the study of organizations. It represents an attempt to expose the theory with sufficient clarity to enable students of organization to assess its actual and potential contributions to the science of organizations. Although I recognize that the present study in no way settles the matter, and that a great deal of room for disagreement remains, my own conclusions are as follows: (1) Parsonian theory *does not* (and I know of no one who maintains that it does) provide a full-blown theory of organization, capable of explaining all that we now know about the subject and yielding all of the hypotheses that are worth testing, and; (2) Parsonian theory *is* sufficiently useful in ordering what we now know, and in yielding testable hypotheses to warrant the careful attention of those who make it their business to study organizations. It does provide the foundation upon which a theory of organization may be built.

My interest in acquiring an understanding of Parsonian theory is one of two objectives which crystallized during graduate training. The second objective, to be discussed later in this chapter, was to achieve some understanding of the nature of scientific inquiry, itself. My interest in Parsonian theory was grounded originally in the personal desire to have whatever contributions I might make to the field of educational administration form some kind of coherent whole. As a matter of personal preference, I have held to the position that I would engage in empirical studies, if at all, only when I could envision a program of such studies each clearly related to the other. Whatever may be the case for others, my biases lead me to prefer to explore systematically within a well defined framework, rather than to sample more freely across a wide variety of areas. Another bias which reinforces that preference is the conviction that the advancement of knowledge is better served by maintaining a reasonable degree of balance between rationalism and empiricism. Hawkins states the case better than I can:

> We may construct coherent theories at the expense of empirical reliability of the concepts employed, or we may give concepts reliable empirical reference at the expense of significant generalizations about them. Either procedure may be a useful tactic in scientific research, but neither is more than that. Using the labels as names for intellectual tendencies rather than for philosophical theories, we may refer to the former procedure as rationalistic and to the latter as empiristic. Empiricism, the tendency to specify descriptive concepts primarily with reference to means and methods of observation and measurement, may lead to revised concepts, among which new theoretical relations can be conjectured and, in the end, demonstrated experimentally. Rationalism, the tendency to elaborate theoretical systems without much reference to the empirical meaning of concepts, may lead to new sorts of observation and measurement. . . . Both tendencies, interacting, are involved in successful scientific inquiry. (Hawkins, 1964, p. 98.)

I must admit that, until very recently, my own bias has been strongly rationalistic (and it still is in the sense that problems concerning the means and methods of observation and measurement are far less exciting to me than are problems of theoretical conjecture). Although I could say all the proper words about the necessity of interaction between rationalism and empiricism, it took several years of discussion, debate and involvement in experimental research with my esteemed associate and close friend, Lee Brissey (who, though he professes to be an empiricist, more closely approximates the balance of tendencies indicated by Hawkins than anyone I know), to acquire an appreciation for the manner in which attention to the means and methods of observation and measurement leads to the identification of theoretical problems, and to an eventual sharpening of theoretical formulations.

There may be other alternatives, but one obvious way to insure that one's diverse efforts add up to more than an aggregation of discrete enterprises is to work within a theoretical framework. It was within the context of such considerations as these that the objective of acquiring some understanding of Parsonian theory developed. As anyone even slightly acquainted with Parsons' work will agree, this is no light reading assignment with which to while away one's leisure hours. The interpretation and application of Parsonian theory is a complex and difficult undertaking, fraught with possibilities for error. In the first place it is a highly complex theoretical system which encompasses several theoretical subsystems. In the second place, these subsystems, and hence the general theory, are undergoing constant reformulation and extension by Parsons and others. There are gaps in the several subsystems and in the general system that remain to be explicated. In the third place, there is neither a single source, nor a few primary sources, to which one may go in order to become acquainted with either the general theory or its subsystems. One who wishes to familiarize himself with the theory must read nearly everything Parsons has written and even then one encounters grave difficulties. Although the many essays, articles and books contributed by Parsons are definitely tied in some way to the theory, the question of which part of the theory is involved is difficult to answer. His analyses of formal organizations, for example, are very definitely theoretically based. But where the parts of the theory explicated therein fit into the general system, or into the relevant subsystem, is seldom clear.

In order to achieve anything approaching a coherent picture of the system one must gather a bit of information here, a bit there, and yet another bit elsewhere, and then attempt to fit them together. On occasions, I have likened the process to an attempt to assemble simultaneously three or four jig-saw puzzles, each of which is a part of a larger puzzle. To complicate matters, some of the pieces are missing and those not missing are thoroughly scrambled and deposited in a number of different locations that must be discovered before one can begin. All this is merely to serve notice that the explication of Parsons' work, and the analyses based on that explication, presented in this document are tentative and subject both to question and revision. It is an explication and application of the theory of social systems as I have pieced it together from a variety of sources. It may not correspond at all well with the theory as its author sees it.

The second objective of long standing previously mentioned, the acquisition of some understanding of the nature of scientific inquiry itself, might best be explained as an interest in "the logic and methodology of science." For me, it does not involve questions of research methodology in the sense of observation, measurement, and design, but rather the broader question of what the goals of a science are and how those goals are achieved. It is not so much a question of what the individual scientist does, but the procedures by which a science progresses, over a period of time, from descriptive investigations formulated in commonsense language to investigations guided by highly sophisticated conceptual languages.

At some point in my studies I came to the realization that what had, until then, been two competing objectives were actually quite complementary. The first insight here came with the recognition of Parsons' own high degree of self-consciousness concerning the methodology of science, and the realization that this work was guided by a well-developed conception of the requirements of a science, and the order in which those requirements must be met. Perhaps the most obvious clue to this is provided in the introductory chapters of Parsons' first major work, *The Structure of Social Action*, (1937) but there are many other clues to which one might point. Through a painfully slow process of self-education I came to learn what now seems to me to be a fundamental principle of learning, one spelled out most recently by Bruner in *Toward A Theory of Instruction*. Bruner puts it this way:

> I suspect that much growth starts out by our turning around on our own traces and recoding in new forms, ... what we have been doing and seeing, then going on to new modes of organization with the new products that have been formed by these recodings. We say, "I see what I'm doing now," or "So that's what the thing is." The new models are formed in increasingly powerful representational systems. (Bruner, 1966, p. 21.)

I think Bruner is saying that growth, or learning (and science can be viewed as systematized learning) occurs when we not only know how to do a thing, but also know what we did when we did it. In other words, a researcher may be highly skilled in the technical sense of knowing all the appropriate modes of gathering and treating observations, but unless he has acquired a language, or a set of concepts, in terms of which he orders those observations, then he is a mere technician. A researcher might wish, for example, to study human verbal communication and be highly skilled in the techniques of collecting specimens of such behavior, in design, and in statistical analysis. But until he can identify the unit of communication and bring to bear a set of categories in terms of which these units can be distinguished from one another, his techniques are useless. He must, at the beginning, identify the units and devise a way to distinguish among them in terms of their properties.

One can, given growth in Bruner's sense, proceed to a representation of a higher order, e.g., "So that's what kind of communication they were engaged in," and get along relatively well. But just as the advancement of empirical research requires the development of new symbolic representations of observed events, so the advancement of science as a whole requires the development of new symbolic representations of the activities of the scientist himself. This is Bruner's "turning around on our own traces." What is required, it seems to me, is not only the capacity to learn about phenomena, i.e., to develop and test increasingly sophisticated representations of what we see, but also the capacity to step back from that process, to reflect upon what we have done, and to develop representations which enable us to consider how what we have done fits into some more inclusive context. In Bruner's terms, what we need is the ability to look at what we do, and have done, in the context of organizational research and say, "So that's what I was doing." In order to do that, however, we need to know what a science of organization would look like, what its component parts are, and how those parts are related to one another both temporally and logically.

Three Levels of Inquiry

I consider at least three levels of inquiry to be essential to the growth of a science. There is, first, the level of empirical research, which may or may not be guided by explicitly formulated theory. In the early stages of a science, an emphasis on theory is less appropriate than an emphasis on descriptive "natural history" research. Second, there is the level of theory in terms of which empirical studies take on meaning. It is commonly acknowledged that each of these two areas depends on the other, that there can be no empirical science in a fully developed sense without both. Far less commonly recognized, however, is the third area which treats such questions as those discussed immediately above. I would argue that this area, which concerns the symbolization of science itself, is as essential to the growth of a science as theory is to empirical research. It is commonplace (and, in some contexts, hopelessly naive) to say that empirical research which has no theoretical relevance is wasted effort, but it is far less commonly said that theoretical and empirical efforts unguided by a conception of inquiry is equally wasteful.

I would not argue that every participant in a field of inquiry should devote sustained attention to these kinds of problems. This would be akin to arguing that every researcher devote sustained attention to the formulation of theory. In the best of all possible worlds it might be desirable for all scientists to be equally competent and interested in all areas, but it would also result in a great deal of duplication of effort. Some division of labor is not only possible, but efficient. The theorist can, and must, rely on the findings of the empirically oriented researchers, and the researcher can, and must, if he is to go beyond descriptive studies, rely on the inventions of the theorist. However, both can (but apparently seldom do) rely on the "looking back on our own traces" and the formulation of higher-order representations provided by the student of inquiry itself.

In one sense this document is a report of progress toward the realization of the two personal objectives identified above. But it is more than that, for I shall utilize the results of inquiry in one area to explicate the results of inquiry in the other. In the first section I shall take up the general question, "What are the basic requirements for a science of organization?" The relatively specific answers to that question will then be treated as questions which can be seen to underlie Parsons' efforts. Thus, if it turns out that one of the basic requirements of a science of organization is the identification of the basic components of organization, then we can view aspects of Parsons' work as attempts to answer the question, "How does one meet this basic requirement?"

The rationale for this approach can be illuminated by considering the following excerpt from David Hawkins' *The Language of Nature: An Essay in the Philosophy of Science.*

> In social communication the literal concept of a code may be analyzed as a *standardized* sequence of questions: the sender imputes them to the receiver, and the receiver, knowing this imputation, imputes to the sender the intent to answer them. (Hawkins, 1964, p. 106.)

It requires but little reflection on the part played by codes in communication to enable one to draw some interesting implications from Hawkins' statement. Clearly, one cannot understand a message transmitted in Morse code, for example, if he does not know the code. Similarly, if social communication can be viewed as messages coded in terms of the questions they are intended to answer, then the transmission of information requires that both sender and receiver know the code, i.e., the questions for which the messages are intended answers. Often, however, neither sender nor receiver knows, in a precise and explicit sense, what the question is. For example, teachers probably send a great many messages for which students do not know the code. That is to say, the students do not know the questions for which the messages are intended answers. Typically, the code is provided in the form of an examination at the end of a series of messages. If Hawkins' point has any merit, and there is a considerable amount of anecdotal evidence in its favor, then teachers probably communicate far less effectively than they might. What they do, in effect, is to send long series of messages to students, ask them to store them all away, and then at some time provide the code and require the students to retrieve the messages and decode them, i.e., match them up with the questions.

It would appear that the effectiveness of communication is increased when both sender and receiver possess the code. Probably it is increased even more when the receiver is questioning actively, i.e., when he solicits answers to his own questions. In every-day communication in commonsense language the problem of matching messages with questions is not intolerably great. When, however, either the questions or the messages are unfamiliar, as, for example, in a statistics course, there is room for a great deal of uncertainty concerning the identification of the questions to which messages are relevant. That is the whole point of this speculative digression into the problems of communication. Parsons' messages are sufficiently removed from every-day preoccupations to make problematical the determination of what the questions are, and what messages are relevant to what questions.

In this monograph, I shall refer to the questions mentioned above to indicate "what Parsons is doing," that is, what questions he is trying to answer. As a self-conscious student of inquiry, Parsons appears to know precisely what questions he is trying to answer, and the student of Parsons who also knows is in a far better position to understand the message.

CHAPTER

1

Requirements for A Science of Organization

The author does not contend that there is only one approach to the development of a science of organization, and hence, only one set of requirements for such a science; however, one approach and one set of requirements is sufficiently clear to serve as a guide. Perhaps a beginning can be made toward the specification of those requirements by turning around on our own traces to consider the current state of the field.

The most impressive publication available on the subject of organizations is the recently published *Handbook of Organizations,* (March, 1965), and the most revealing observation that one can make about that publication is that it contains as many approaches to the subject as there are contributors. Seen from that perspective, the handbook provides a remarkably accurate portrait of the field. Although there has been a vast amount of research done in organizations, and about organizations, there has been little study of *organization* as such. We study leadership, morale, decision making, communication, bureaucracy and role conflict, but not organization. More frequently than not, a particular role, e.g., that of superintendent of schools, has been studied in isolation. It is as though the chemist selected a single element of a compound for examination and never got around to investigating how that element interacted with other elements *to form the compound*. In the field of educational organization and administration we have had innumerable studies of the roles of superintendent, principal, teacher, trustee, etc., but we know very little about *organization*. We cannot even say, in any precise way, what there is about an educational organization that makes it different from a business firm.

The study of human organization is analogous to the study of organization in the physical world in which 17th century chemists were engaged. The questions they posed were, "What are the material constituents of things?" and "How are they combined to make a thing what it is and not something else?" They assumed that the number of constituent elements was limited and that each of the wide variety of types of things was a particular arrangement of these elements.

There are a number of parallels in the human sciences. Psychologists ask, "What are the constituent elements of the human personality?" and "How are these elements combined to make a personality what it is and not something else?" Similarly, students of organization might ask, "What are the constituent elements of organizations?" and, "How are they combined to make a given organization what it is and not something else?" Like the chemist, the student of organization must assume that there is a limited number of elements out of which the many differing kinds of organizations are constructed. If the elements of educational organizations are different from those of the business firm, and if those of the hospital are different from both, then we may just as well make an exhaustive catalog of elements and be done with it. As a matter of fact, much of the work to date has done just that. The accumulated research constitutes a partial catalog of common-sense elements—business executives, educational administrators, teachers, social workers, etc.

The advantage of identifying analytical elements, of course, is that given a knowledge of the elements and their actual and potential combinations, one can, as physical scientists have done, engage in synthesis, i.e., deliberately create from the elements both combinations found in nature, and combinations not found in nature. These observations bring to the surface a second characteristic of present research on organization. In recent years there has developed in a variety of areas a strong emphasis on "innovation," "change agentry," "organizational therapy," "organizational development," etc. All of these approaches to the creation of "better" organizations have foundered on the same rock; they attempt synthesis without analysis. There are several aspects of this general problem. One is that creating new combinations of elements when one knows neither what the elements are nor what properties they have, nor how they enter into combinations, is an extremely difficult, if not impossible, task. A second aspect of the problem has to do with the position taken by some investigators that we can learn about organizations at the same time we are improving them by intervening and observing what happens. The problem with this approach is that if one does not know anything about the state of the organization before intervention he does not know in any precise sense what he did, and he cannot know what the state of the organization is after intervention. Unless one has some means of assessing the state of the organization as a system before intervening, unless one knows which variables his intervention acts upon, and unless one can assess the state of the system after intervention, he is merely tinkering with the machinery.

The most general requirement for a science of organization, then, is the development of means of characterizing the state of organizations as systems. The concept of *system* and *system state* are sufficiently misunderstood to warrant some attention here. The tendency of most authors to use the definite article "the" in the phrase "the system" obscures part of the useful meaning by suggesting that the referent of the concept is an entity, or a collection of entities. While this usage may be appropriate in some instances, the most general usage treats the referent of the concept as order, or interdependence. The term system, as used here, is a synonym for order.

The Concept of System

When the concept system is used to refer to a collection of entities, there is a risk of assuming that the system involved is among the entities. The referent of the term, system, however, is not the entities, but the properties of entities and the orderly relations among those properties. The entities, whatever they may be, are characterized in terms of variable properties, or variables, and the system, order, or interdependence sought is among those variables, not among the entities in their concrete wholeness. As Kuhn has put it:

> The elements, or components of a system are *not* the entities in the system, but qualities or states of those entities. In the thermostatic system, it is not the air in the room, but its temperature which is the element in the system. It is not the thermostat, but the position of its switch. It is not the furnace, but its state of being on or off. Similarly, the environment is not the outside air, but the temperature of the outside air along with the properties of the wall which will determine how fast heat will move between system and environment. (Kuhn, 1963, p. 50.)

This is not to suggest that traffic in entities has no place in scientific analyses. Kuhn makes this clear in his elaboration of the above.[1]

> In the strictest sense we are referring here to the kind of units with which we would analyze the *behavior* of the system, as they might appear in a formula or a matrix. This stage of actual analysis will normally, perhaps necessarily, be preceded by the preliminary one of listing or diagramming the entities whose changing states determine or constitute that behavior.

Now the concept of system state may be illustrated in terms of Kuhn's example. One may regard the orderly relations among the variables, room temperature, position of the thermostatic switch, and state of on or off of the furnace as a system. These variables are termed *variables of state,* or variables defining the state of the system. A description of the state of the system at a given time is provided for by specifying the values of the several variables. What makes it a system is that there are known relations among the values of the several variables. One can predict what effect a drop of so many degrees in room temperature will have on the switch, and one can predict what effect a change from off to on will have on the on-off state of the furnace. Similarly one can predict what changes will occur in the state of the system given certain environmental changes, i.e., changes in the temperature outside the room.

The important point to be drawn from this example is that unless one knows (1) the entities involved in the system, (2) the relevant properties of those entities, and (3) the relations among those properties, his chances of changing the state of the system are slight. Only through accident could one succeed through tinkering to control the temperature of a room if he had only a vague notion that it was uncomfortable (i.e., he had not identified the air as an element and its temperature as a variable property), and if he had no knowledge of thermostatic switches, furnaces, and the relations among their properties. Points 1, 2, and 3, then, identify several more specific requirements for a science of organization.

It is true that the only way one can acquire this kind of information is to work with the entities among whose properties system is sought. One can either observe the natural course of events with as little interference as possible, or one can intervene in various ways to see what happens. But in either case, one must have some idea of what the elements of the system are, and what properties of those elements are relevant.

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[1] This statement was inserted at Kuhn's request when he granted permission to quote the preceding section from *The Study of Society.*

There is little to be gained, for example, in the study of organizations by identifying the concrete human participant as the element and then making every conceivable observation on those elements. There are far too many properties that may be ascribed to any such entity to make this a feasible approach. At the very least, one must decide what it is that he wants to know about. If one's interest is in the effectiveness of the organization, then he can study that variable under different conditions and identify the system in which it is embedded, i.e., the variables to which it is related. Similarly, if one's interest is in innovation in organizations, then to the extent that the meaning of innovation is operationally clear, he, too, can search for the system in which it is embedded.

There is an alternative, however. One may be interested in organization as such, from the point of view of constituent elements and their combinations. If this be the case, then one may proceed like the chemist, to classify systematically his subject matter. The point of classifying a subject matter is to provide a relatively complete description of the different observable properties of constituent entities and their combinations. In Kuhn's terms, the problem is one of describing the various properties of the entities among which system is sought. Given a situation in which the variable properties of the entities have K possible values and there are N entities, then the total number of possible configurations of entity values is K^n. Thus, if the entities are the thermostatic switch, the furnace, and the temperature of the air, and if each entity is described in terms of one variable which has two possible values (on-off, on-off and hot-cold) then there are $K^n=2^3=8$, configurations of values that are possible, each configuration being a particular set of values of the properties of the constituent entities.

If one were to observe a number of such sets of entities and to record for each the configuration of values, it would soon become apparent that not all configurations occur in nature, i.e., that there is system, or order, in the relations among the several properties. This is similar to noting, in the context of organizations, that we rarely, if ever, find an empirical system in which a high level of technical competence (a property of one kind of entity) is combined with a high degree of authority (a relation among entities).

A set of three variables, each capable of taking on two states, is a very simple one. An exhaustive examination of the possible configurations of values is feasible. But suppose we have a three variable set in which each variable can take on any one of 100 values (or even more complex, suppose the variables are continuous). Now the number of possible combinations is $100^3=1,000,000$ (infinite if the variables are continuous). However, one does not need to know all possible combinations. This would be comparable to seeking to identify all possible positions of a planet in a three dimensional space, and all possible velocities of the planet. If one knows the relation between the variables, i.e., if system is present, then all that is required to predict future states of the system is the values of the variables at a given instant.[2]

There are at least two respects in which the thermostatic system illustration is inadequate and potentially misleading. First the concept of system is not limited to situations involving identifiable entities with specifiable properties. As an example cited by Rothstein (1958) which illustrates this point, consider Ohm's law $E=RI$, which says that if one measures the potential difference, E, across the ends of a conductor through which a current, I, is flowing, and also measures the current, then in repeated measures for various values of E and I, the ratio of E to I is a constant characteristic of the conductor (R) which is independent of the values of E and I. Both E and I are variables which can take on a wide variety of values, and the possible combinations of two values that might jointly occur are infinite. The discovery of a law, however, makes it possible to ignore most of these possibilities, for whatever the value of I, E is always going to be the product of I and R.

The second respect in which the thermostatic system example may be misleading is that the entities, if these be involved, need not be concrete, substantive, "point-at-able" things. The entities may be theoretical, or hypothetical, "creations of the human intellect." The atomic and subatomic particles of physics are such entities, as is the personality need, and the social role. We shall give further consideration to this point below.

Whether one begins with a specific non-entitive interest and searches for the system in which it is embedded, or begins with constituent elements, the point is to identify relations among variables. The same point can be made with respect to a second level. Rather than to look at the constituent entities in an organization, one may focus on the organization as an entity and search for system among the several properties in terms of which it is characterized. Thus, if one is interested in organizations he may classify them according to what they produce, how they secure their resources, how they make their products available to recipients, etc. Here again, each of the several variables will have at least two values and the point is to identify relations among the variables.

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[2] The exception to this statement is the bounded system, i.e., one in which the relation between the variables changes when identifiable boundaries, or limits, on the values of the variables are exceeded.

TWO KINDS OF SYSTEM

The entities, or units, that enter into the treatment of objects and events as systems are of two major kinds. On the one hand, we may speak of *structural elements*, or units, and on the other, of *process elements*, or units. Each of these may, in turn, be described in terms of character and relational properties. *Character properties* are those in terms of which objects are differentiated from one another. *Relational properties* are those in terms of which they are related to one another, or to some common point of reference.

Structural character properties are those in terms of which structural elements, or units, in the system are differentiated from one another. Relational components of structure are those comprising stable elements in the relations among units. The classic example of process is motion in classical mechanics. However, the more important kind for present purposes are processes of interaction among units. Character properties in the context of process, in this sense, are those which differentiate units of process from one another, e.g., in terms of different types inputs and outputs. Relational components of process are those which define relations among units of process. Interaction in an economic system, for example, involves exchanges of goods and services, relations among which are defined by money. Bales' (Parsons and Bales, 1953) approach to interaction analysis provides a set of categories in terms of which verbal utterances can be differentiated from one another.

Thus we can distinguish between two kinds of system: *structural system*, and *process system*. The notion of structural system seems applicable only when the order of reference is that which holds among the relational properties of two or more entities, or units. Thus, while it does not seem particularly useful to speak of structural order with respect to the variables position and momentum, it does seem useful to apply that term when considering the relative positions of the several planets. Within the concept of structure, then, a distinction may be made between (1) *units* (parts, or components, with differentiated properties) on the one hand, and (2) *relations* among the properties of these units, on the other. The structural units of the solar system are the sun and the nine planets. The units of a physiological system may be the peripheral blood vessels, the thyroid gland, and the adrenal gland. The units of a social system may be roles and collectivities. And the units of a word may be its component letters. Strictly speaking, however, the focus of interest is not the unit such as the planet or role in its undifferentiated wholeness. Science does not proceed on the basis of descriptions of whole things, but rather on the basis of descriptions of properties of things. Thus, to be accurate we should say that the unit of classical mechanics is the mass-point. In the physiological example it is not the concrete blood vessel that is the thing of interest, but one of its properties, e.g., its degree of dilation.

The above remarks must be further qualified by noting that the concept of unity or entity, seems to reduce to a cluster of variables the values of which remain relatively constant over time, and which have some permanence as a cluster. Thus, Kuhn's thermostat can be viewed as an entity because it can be "constructed" from a cluster of observable properties which will, in all probability, still be observable when one looks again. Units, then, consist of clusters of *stable* properties with which are associated additional *variable* properties, e.g., the position of the thermostat switch.

But units alone do not constitute a structure. Structure consist of stable unit, or character, properties and also relational properties. Without adding or subtracting any units, and without changing any of their character properties, we can completely change structural system by changing the relations among them. Suzanne Langer (1957) offers, as an example, the names "Ronald," "Roland," and "Arnold." They contain exactly the same letters, but the relative positions of these letters, i.e., their mutual relations of before and after, are different in each case. Similarly, the units of both a university and a public school might be said to be roles which have very similar character properties, but the relational properties of these units in the two settings are sufficiently different from one another so that no one with more than superficial acquaintance with them mistakes the one for the other.

Structural system, then, may be treated as consisting of (1) units, such as the particle, or the role, with selected character properties, and (2) patterned relations among unit properties, such as spatial locations, the laws of contract, property, etc. Both these aspects of structural system may be distinguished from process system. There are cases of scientific inquiry in which the sole concern of an investigation is structure. Descriptive physical geography, for example, simply delineates the location and spatial relations of mountains, plains, rivers and oceans. Structural order, however, usually provides the basis for investigations of processes which go on within structures, and through which structures either change or are maintained. Implicit in the preceding statement is a three-fold distinction within the concept of process.

(1) Stable processes, as illustrated by motion in classical mechanics, which involve neither structural change nor structural maintenance processes.

(2) Compensatory or equilibrium maintenance processes which tend to maintain a given structure in the face of external variability.

(3) Processes through which structural system undergoes change.

The classic illustration of stable process is that of motion in classical mechanics. Here the processes of motion are stable and involve neither changes in the character properties of the units (mass) or changes in the relations among units (relative distances from a point of reference). Although the values of the process variables undergo continuous change, the orderly relation between structural units remains stable. One can conceive of equilibrium maintenance processes in this context by imagining the introduction of an external force which tended to disturb the orbit of a planet, counter-acted by a tendency toward the re-establishment of the original orbit. Similarly, one can conceive of structural change in the same context by considering what might happen if an explosion dispersed the mass of a given planet into several widely separated pieces. In addition to the change in the mass of the original planet, changes would occur in the relative locations of other planets and a new equilibrium would be established.

Stable change process of the kind illustrated by the motion of classical mechanics seem to have few, if any, counterparts in human behavior. Situations analogous to equilibrium maintenance and change processes, however, are relatively numerous. The term equilibrium identifies the process system among variables which remains constant through change in the values of the variables. Equilibrium maintaining processes, then, are those which operate to compensate for any deviations from that system and to return the variables to the original system. For example, the laws of a society order, or systematize, the relations which hold between the variables, in terms of which social actors are described. Slavery, for example, is one relation that is unacceptable. Should it occur, processes would be set in motion to restore the variables to the original order. Again, if consumer wants relative to the supply of goods and services produced by an economic system were completely stable, the production processes internal to the system would continue in a routinized manner. The fact is, however, that wants change continuously, requiring compensatory processes within the system (which do not change the basic structure of the economy) to satisfy consumer demands. It should be apparent that the state of an educational system in relation to the consumers of its services might be conceived in parallel terms.

The processes most characteristic of social systems would appear to be various forms of communication. Communication may be viewed as a set of control (feedback) mechanisms, involving several kinds of media, through which the values of process variables are kept within limits compatible with the maintenance of the main structural system. Power, for example, can be conceived as a circulating medium (utilized in the communication of binding decisions) which controls the outputs of other units in the interest of maintaining stability in relation to the environment. Similarly, the expenditure of money can be conceived as a form of communication through which one unit controls the behavior of another.

When circularity of action, e.g., reciprocal communication, exists among the structural units of a system, feedback may be said to be present. "Negative feedback is that which operates in a direction opposite from that of the input" (Kaplan, 1964). Positive feedback is that which operates in the same direction as an input. Automatic pilots that counteract deviations from level flight exhibit negative feedback. Negative responses to deviant performances of social actors can be conceived similarly, just as positive responses can be seen as operating in the same direction as, or reinforcing, a given kind of performance.

Associated with the concept of equilibrium processes is the concept of structural change processes. Clearly, an alternative to the maintenance of a state of equilibrium is failure to maintain such a state. Failure of compensatory mechanisms to operate successfully leads to structural change, an extreme example of which is dissolution of the system, as in the death of a living organism in which temperature maintaining mechanisms fail. Short of dissolution, there are less drastic structural changes, as for example, the differentiation of new structural elements from existing ones. A familiar example from our own field is the historic process through which administrative roles came to be differentiated from the teaching role. A more recent example is the differentiation of the guidance counselor role from that of the teacher.

The system, i.e., the kind of order, referred to most widely in the social sciences is *functional.* Functional system is that in which units are differentiated from one another in terms of the contribution each makes to the functioning of the system. Thus, for example, roles may be conceived as functionally differentiated units of a social system. To say that the function of such a unit is goal-attainment, for example, is to say that it contributes to the maintenance of system goal-states in relation to an environment.

CLASSIFICATION OF UNITS

It is important to recognize that the classification system utilized in the differentiation of units does not necessarily coincide with the common-sense designations such as principal, executive, or foreman. If roles are viewed as functionally differentiated units of social systems, then the labels which are utilized to designate them and distinguish them from one another will reflect the functional frame of reference within which the analysis is made. Roles identified within a given frame of reference will probably not coincide directly to the common-sense frame of reference. So long as one insists on using both analytical and common-sense concepts there is a problem of moving between them, and one is faced with the task of saying that the common-sense role that we speak of as "principal" corresponds to such and such a role, or roles, in the new language.

The reason for this is clear. Every-day language has relatively little "system" built into it. To identify someone as a principal, for example, implies some things about how that person will behave, but far from enough to be scientifically useful. Similarly, to identify a substance as wood implies that the substance will float, burn, return to the earth if thrown into the air, etc.; but to identify a substance as carbon implies a great many things both about its properties and about how it will behave. The identification of an organism as a fish or a mammal enables one, without further investigation, to make certain assertions concerning the organism's circulatory, nervous, secretory, and respiratory systems. The adoption of a classification system is never a matter of deciding what things really are (e.g., is a whale really a mammal?) but a matter of maximizing the information provided with the identification of entities. Names, whether of the common-sense or scientific variety, are grounded not in the immutable nature of things, but in the convenience of the users.

The tentative and partial answer that I have given to the question, "What are the requirements for a science of organization?" can be summarized as follows. The initial problem for the student of any phenomenon is the identification of the basic unit of analysis. For Bales this problem was one of deciding on the unit of communication. This is never a question of finding *the* unit. It is, at least in part, an arbitrary matter, for what is a unit to one investigator may be a system to another. Given the designation of the unit, the second task is a descriptive one. Description, in turn, is the classification of things in terms of their observable properties. And, as Hawkins (1964) has observed, any act of classifying a thing by its observable properties or relations is measurement; it is a procedure of observation, the outcome of which reduces the extension of a set of alternatives.

> Descriptive concepts have as a function in the economy of knowledge the linkage of two universes of discourse, the concrete perceptual and the abstract conceptual. In being classified under this or that conceptual heading, any empirical object or state of affairs is not merely brought into relation with the particular abstraction that is the basis for classifying it; it is classified with some things, and apart from others, and it is involved in all the consequences resulting from the linkages, logical and factual, of this class concept with others. (Hawkins, 1964, p. 97.)
>
> A descriptive concept must be usable as a basis for classifying things, [it must lead to sensory discrimination among alternatives, i.e., measurement] and it must be linked with other concepts in a way that supports reliable inferences about the things thus classified. It must have, as it were, two kinds of reliability: that of being reliably related to other concepts in the system of knowledge, and that of reliably guiding the classification particulars.... What is characteristic of common-sense concepts is that they are linked together in a rather loose, implicit system of beliefs; and, since such concepts are not sharply defined in an empirical sense, it is a considerable problem, to say just how they apply in particular cases. (Hawkins, 1964, p. 98.)

It is a serious and common error to suppose that the qualitative concepts are not measurement, and therefore not scientific. For some purposes qualitative discriminations are entirely adequate. Thus, in geology, the description of the state of the earth in terms of the composition and arrangement of strata was sufficient basis for the construction of an explanation of that state. The essential point is that description is the fundamental basis of any science. Whether that description is couched in terms of qualitative discriminations as in the mass of observations recorded by geologists, or in terms of numerical discriminations as in the mass of observations accumulated by astronomers, has nothing to do with the scientific status of the inquiry. Both kinds of observation are descriptive, and description is what is required. Without it there is nothing to be explained, nothing to theorize about. The major distinction between geology and astronomy seems to be that in the former the state of the unit of interest (the earth) is sufficiently enduring to make the prediction of future states less of a concern than the explanation of the present state. In the latter the states of the units of interest (the planets) undergo constant change, i.e., their positions in space change, and the prediction of future states is the primary concern. Had the motion of the planets been as imperceptible as the change of the earth's surface, astronomy might have been quite a different sort of science.

Thus, from the point of view adopted here any act of describing, or classifying, in terms of observable properties is measurement. Whether the description and classification is made on the basis of a biological or geological taxonomy, or on the basis of a numerical scale is irrelevant. It is certainly the case that classification on the basis of a numerical scale is more informative than taxonomic classification, but as Hawkins has observed:

> Accurate physical measurements may convey a large quantity of information, but so may a Darwin's repeated observations on the facial expressions of animals. Which sort of discrimination is best—most scientific—depends on the nature of the subject matter and the theoretical framework within which observation is going to have scientific utility. (Hawkins, 1964, pp. 106-107.)

Classification of units in terms of descriptive concepts is a necessary condition for the development of a science, but, not a sufficient one. The whole point of description is to evolve a system of categories which is formed to fit the subject matter. This is what Parsons has called a categorical system:

> ... in these systems, the principles of classification, themselves, include statements of certain relationships among the classes. The elements are so defined as to constitute an interdependent system ... a categorical system, thus, is constituted by the definition of a set of interrelated elements [concepts], their inter-relatedness being intrinsic to their definition. Thus, in classical mechanics such concepts as space, time, particle, mass, motion, location, velocity, acceleration and their logical interrelations constitute a categorical system. A categorical system in this sense is always logically prior to the laws which state generalized relationships of interdependence between variables in the system. The laws presuppose the definitions of the variables, and they presuppose the relations which are logically implied by the definitions and by the kind of system in question. In so far as specific laws can be formulated and verified, a categorical system evolves into a theoretical system. (Parsons and Shils, 1951, p. 50.)

To continue to illustrate with the work of Bales, the description of units of communication as "giving opinion," "making suggestions," etc., is a necessary and useful beginning. What is required beyond this is the development of a categorical system in terms of which the common sense descriptive information can be described.

DESCRIPTIVE FRAMES OF REFERENCE

Categorical systems are sometimes referred to as descriptive frames of reference. A descriptive frame of reference, in this sense, is a conceptual scheme within which facts about objects and events are stated. Such schemes consist of a number of concepts such as mass, velocity, location, etc., which are definitionally related. Any physical unit can be thought of as capable of description in terms of a particular combination of the values of the several properties. Thus an object may have a certain mass, a certain velocity, and a certain location in space. The spatiotemporal frame of reference is a conceptual scheme within which facts about the location and motion of objects can be stated. What is required for the study of organizations is a similar frame of reference. It is necessary that we be able both to identify the relevant units within organizations, and to state facts about those objects within a frame of reference.

Descriptive frames of reference are fundamental to any science, but they do not exhaust the problems of scientific inquiry. As Parsons put it almost three decades ago:

> It is the universal experience of science that such analytical elements [of frames of reference], once clearly defined, will be found to have certain uniform modes of relation to each other which hold independently of any one particular set of their values. (Parsons, 1937, p. 36.)

It must be said, however,

> . . . that mere location in terms of such a scheme does not by itself explain anything. But it is an indispensable preliminary to explanation. The statement that a physical body at a given time and place has a given property, say a particular velocity, does not explain why it has this velocity. That implies a reference both to its other properties at this and previous times and to the properties of other bodies. (Parsons, 1937, p. 29.)

The elements, or categories, of the descriptive frame of reference are the variables of a science, and it is among these variables that the lawful relations which convert a frame of reference to a theory are sought.

Theoretical systems, then, are categorical systems for which the laws relating the concepts have been formulated and verified. Classical mechanics is the stock example of such a system. By logical manipulation of such a system it is possible to make predictions about the consequences of changes in the values of the variables. Moreover, as in the case of the thermostatic system, it is often possible, through manipulation of certain variables of a system to bring about desired changes in the values of other variables. It should be noted, however, that theoretical systems do not describe how empirical systems behave. They describe how an empirical system might behave under ideal conditions. Although tidal motion is in one sense explained by classical mechanics, the theory is not an adequate basis for predicting tides because of the intervention of currents, wind, land masses, etc. Since these factors have no place in the theoretical system, they are not accounted for, and hence, bring about error in prediction.

From the above considerations it seems possible to state, in a tentative way, the minimum requirements for a science of organization. These include: (1) the selection of the basic elements or units of organization, both in the context of structure and process; (2) the invention of categorical systems, or descriptive frames of reference, in terms of which the character and relational properties of units are described, or in terms of which facts about the units are stated; (3) sufficient assessment to indicate which of the possible states of the system are empirically observable, i.e., the discovery of the laws holding among the variables in terms of which units are characterized; and (4) the invention of a theoretical account from which both the lawful relations already observed, and hypotheses concerning additional relations can be derived.

CHAPTER 2

The Theory of Social System

In this chapter we shall examine the basic concepts of Parsonian theory and draw upon Parsons' works to illustrate its utilization at the societal and societal subsystem levels.

Before launching into that discussion, however, some prefatory remarks about the nature of the discussion itself are in order. The writing of the exposition which follows was a process of "thinking on paper," not of reporting familiar and fully understood materials. One of the hazards of such an undertaking is that understandings acquired in the process of writing later sections reveal inadequacies in earlier sections, sometimes necessitating extensive revision of the faulty materials. It also happens that understandings acquired in rewriting faulty sections reveal the need to revise subsequent materials. What develops, is a process of alternately pushing ahead, backing up to incorporate newly acquired understandings, and pushing ahead again until some *approximation* of closure and consistency is attained.

I emphasize "approximation" because I am not satisfied that the account presented below is a wholly satisfactory one. There are some problems of which I am clearly aware, although I do not know how to solve them. I am also reasonably certain that there are problems of which I am unaware. Hopefully, these will be identified by those who read this, or by myself as I continue to struggle with the ideas. At any rate, the reader is warned, the message which follows is a tentative one which is by no means the last word on the subject.

One further comment about the material which follows is appropriate here. Parsons has provided a frame of reference for describing social phenomena, and a model for explaining and thinking about these phenomena in settings ranging from small groups, through organizations, to societies. Models are constructed for several purposes. On the one hand they provide explanations for described phenomena, i.e., they provide an account from which the descriptions within a given frame of reference can be deduced. On the other hand, they typically permit one to deduce far more than the observations which they were initially intended to explain. For example, consider the procedure adopted by Torricelli and Pascal. During Torricelli's time the action of water rising in conjunction with pumping was explained by saying that nature abhors a vacuum. Up to 34 feet this explanation was satisfactory, but at that height, nature no longer abhorred a vacuum. Dissatisfied with a capricious nature, Torricelli suggested that we imagine that the earth is at the bottom of a "sea of air." Such a sea of air would produce pressure just as water produces pressure. Let us also suppose that there is sufficient pressure to raise water to a height of 34 feet. Now, if we note that mercury is 14 times as heavy as water, we should find that mercury can be raised to a height only one-fourteenth as great as that of water. This last suggestion (hypothesis) is a deductive dividend of the "sea of air" model postulated to account for the original observation. Pascal deduced and tested another hypothesis when he investigated the height to which various liquids could be raised at various altitudes. Given the model, the hypothesis is fairly obvious. If the earth is at the bottom of a sea of air which exerts pressure, then pressure should decrease as one rises toward the surface. Hence, the height of a column of liquid supported by air pressure at the peak of a mountain should be less than at the base.

Parsonian theory is a model in precisely the above sense, and one should not be misled by the fact that the presentation which follows is worded as though it were intended to be a description of what actually is the case. It is not. It is simply too laborious and repetitious a procedure to continually interject such phrases as, "Think of society as . . . ," "We may regard organization as . . ." We shall certainly want to reach the point of saying, "If we think of organization as . . . then we should find . . . ," but it seems unnecessary to remind the reader constantly that a model is being presented.

Basic Concepts of Parsonian Theory

The general conception of human behavior that Parsons and others have been developing over a period of years is termed the theory of action. Action is viewed as a process occurring between two structural parts of a system—actor and situational object. A system is seen as two or more interacting units which are, on the one hand, actors, and on the other hand, objects to one another. Systems are always constituted by the relations between one or more actors and one or more situational objects. The actor is not conceived as one system which acts in relation to a situation which is then treated as another system. Actor and situation together constitute the system of reference. What is viewed as an actor at one level of analysis can, however, be viewed as a system constituted by relations among lower-order units.

An action system, within this conception, encompasses four major analytically separable subsystems: (1) the cultural system; (2) the social system; (3) the psychological system; and (4) the system of the behavioral organism. Put another way, all concrete human behavior involves cultural, social, psychological and organic aspects. All four systems are abstractions from the same concrete human behavior, and all behavior involves all four systems. Our concern in this paper, however, is limited to the social system element.

Before proceeding further, let us consider what is intended by the term "social system." It is a term which one encounters frequently in the context of discussions concerning societies, organizations, and groups. More often than not the use of the term adds little to the discussion. From the point of view taken here, to identify something as a social system is to make an assertion of empirical fact. To speak of the behavior of a plurality of units, e.g., persons or organizations, as a social system is to assert either one, two, or all, of three things. The first is that, if one records (within some frame of reference) and analyzes the behaviors of the several units, then one will find that those behaviors are not random, that there are contingent relations among the behaviors such that knowing one enables one to predict, with some degree of probability greater than .50, what the next will be. The second is that if one records the same behaviors and identifies the unit engaging in that behavior, then there are contingent relations holding among the behaviors of the given unit such that knowing what the unit has done enables one to predict what it will do. The third is that knowing something about the characteristic behaviors of several units, there are contingent relations among the characteristic behaviors such that knowing what a given unit characteristically does enables one to predict what another unit characteristically does.

In the terminology adopted in CHAPTER 1, the Parsonian framework provides a descriptive frame of reference within which to state facts about the properties of, and the relations between properties of, actors and objects. Individual persons are actors and objects. However, for purposes of social system analysis, it is the sector of the personality involved in a role, not the total personality that is relevant. Not only individual persons in roles, and subsystems of them, but also collectivities, i.e., organized systems of the role performance of pluralities of persons in roles, may be treated as actors and objects. When an entity is treated as a unit, its properties are always attributed to the unit as a whole. The internal sources of these properties are not identified. When an entity is treated as a system, however, attention is focused on the internal structures and processes in terms of which those properties become understandable. A unit is an actor when it is conceived as orienting to one or more other actors, and/or non-social objects, and performing, or overtly acting, in relation to them. A unit is an object when it is conceived as being oriented to and acted toward by one or more other actors.

From the point of view of a given actor, all objects which have meaning to it are part of the situation. The situation is composed of: (1) social objects—objects which are also actors; (2) physical objects—objects which have spatiotemporal existence, but which do not interact with the actor or reference; and (3) cultural objects—patterns of symbolic meaning which can be learned and transmitted, but are not conceived as interacting with the actor. The actor himself, of course, is an object to himself.

THE FUNCTIONAL IMPERATIVES

Structural units, units of process, and relations among both of these, are always described in terms of their relation to some system taken as a point of reference. The categories in terms of which these aspects of a system are described are the four imperative needs, exigencies, or functional problems of systems of action. These four functional problems arise from two fundamental dilemmas of human existence. First, every system consists of a plurality of units, and functions in relation to an environment defined as external to it. One dilemma is whether to give priority to the solution of the problems of co-existence of the units, or to the problem of optimizing the relation to the environment. A fundamental postulate of the Parsonian view is that no amount of attention to the problems of co-existence will, by itself, solve the problem of relations with the environment, or vice versa. A second dilemma concerns the assignment of priority between continuity and stability over time, on the one hand, and direct, immediate gratification, or consummation, on the other. Cross-classified, these dilemmas define the four functional imperatives. These are: (1) the problems of consummation in relation to the environment; (2) the problem of the continuity and stability over time of the relation to the environment; (3) the problem of consummation in the relations among units; and (4) the problem of continuity and stability over time in the relations among units. In slightly different terminology these can be elaborated, respectively, as follows.

Goal-Attainment—Every social system functions in an environment defined as external to it, with which it interacts (through the agency of its units), and in relation to which it maintains boundaries. A system is characterized by one or more goals which specify, and produce a tendency toward, the establishment of certain relations between the system and its environment. A goal state for a system is defined as a relation between the system, i.e., its member units, and the environment which is maximally favorable to system stability, i.e., a state in which events in the environment are supportive of established processes within the system (among member units). Once achieved, such a state tends to be maintained, and if absent, tends to be sought through interaction with other units by one or more units in the system. A goal, as distinguished from a goal-state, exists only when the desired state differs from the actual or anticipated state. Environment for a social system includes not only other social systems and the physical environment, but also the personalities of member units, and the non-institutionalized elements of the cultural system.

Adaptation—Simultaneously with the pursuit of its goals, a system must, if it is to function satisfactorily in the long run, provide for generalized adaptation to the environment. A system with a single goal faces no adaptive problem, but when a plurality of goals is sought, there arises a need for generalized facilities which are not committed in advance to any particular goal, and hence, can be utilized in the pursuit of a variety of system and unit goals.

Integration—The actions of differentiated units of a system may be mutually supportive and beneficial to the functioning of the system, or they may be antagonistic and obstructive. Integration is the imperative to maintain mutually supportive, or solidary, relations among the units of the system. An integrated social system is one in which there is mutual acceptance of units in their respective roles.

Pattern-Maintenance and Tension-Management—The function of pattern-maintenance concerns the imperative to maintain the pattern of the units, i.e., the structure of the system. A system without pattern, or structure, is a contradiction in terms. The absence of structure is randomness, unpredictability, and the absence of system; hence, the maintenance of its main structural patterns is a fundamental imperative for social systems. Since the structure of social systems consists of patterns of institutionalized, normative culture, and since institutionalization involves motivational commitment on the part of member units to act in accordance with cultural patterns, the problem of pattern-maintenance involves the processes through which the motivational commitments of member units are acquired, maintained, and expressed. (See FIGURE 1)

Figure 1

IMPERATIVE FUNCTIONS OF SOCIAL SYSTEMS

	Continuity and Stability over time INSTRUMENTAL	Immediate Gratification CONSUMMATORY
Relation to Environment EXTERNAL	*Adaptation* Continuity and stability over time in relation to environment.	*Goal-Attainment* Gratification in relation to environment.
Co-existence of units INTERNAL	*Pattern-Maintenance* Continuity and stability over time in relations among units.	*Integration* Gratification in relations among units.

The place of the functional imperatives in the Parsonian model is analogous to that of essential variables in biology. In the later context certain variables must remain within limits in order for the animal to stay alive.

> Every species has a number of variables which are closely related to

> survival and which are closely linked dynamically so that marked changes in any one leads sooner or later to marked changes in the others. Thus if we find in a rat that the pulse-rate has dropped to zero, we can predict that the respiration rate will soon become zero, that the body temperature will soon fall to room temperature, and that the number of bacteria in the tissues will soon rise from almost zero to a very high number. These important and closely linked variables will be referred to as the *essential* variables of the animal. (Ashby, 1960, p. 42.)

In Parsons' view physiological systems are analogs of social systems in a further respect. Both involve homeostatic, or equilibrium-maintenance processes.

The temperature of the interior of the warm-blooded animal's body may be disturbed by exertion, or illness, or by exposure to the weather. If the body temperature becomes raised, the skin flushes and more heat passes from the body to the surrounding air; sweating commences, and the evaporation of the water removes heat from the body; and the metabolism of the body is slowed, so that less heat is generated within it. If the body is chilled, these changes are reversed. Shivering may start, and the extra muscular activity provides heat which warms the body. Adrenalin is secreted, raising the muscular tone and the metabolic rate, which again supplies increased heat to the body. (Ashby, 1960)

The general principle is that some disturbance, either internal or external, tends to drive an essential variable outside its normal limits, but this change itself activates a mechanism which opposes or neutralizes the disturbance. The functional imperatives are thus seen as essential variables whose value must remain within limits if the structure of the system is to be maintained. This does not imply that social structures do not change, or that stability is more important than change, only that change and maintenance are two distinct kinds of processes.

SYSTEM PHASES

From a slightly different point of view, the four functional problems are conceived as variable dimensions of a phase space in terms of which the structures and processes of the system are classified, or described, and states of the system—its units' relations to one another—are described. A change of state may be described in terms of increases or decreases in the values of the four variables. Each of the four system problems is conceived as a focus in terms of which both structures and processes are differentiated from each other. Thus, they are conceived of as four distinct but interdependent phases. There are determinate temporal relations among phases, such that the requirements of the system necessitate, after prolonged action in one phase, a shift to another phase to re-establish the balance of the system and to meet system problems neglected while in other phases.

A phase is regarded as the changing state of the system, through some interval of time when its movement in a given dimension is maximized relative to its movement in the other three dimensions. Any act on the part of a member unit is conceived as exerting some kind of directing influence on the movement of the system, and may thus be described according to the system problem to which it is addressed. The system, then, is conceived to be made up of two or more units, or members, which interact with one another. The system is conceived as embedded in an environment with which it interacts through the agency of its member units. The system changes in relation to the environment, and in its internal states, only through the interaction of its units. The four phases are dimensions within which the system moves. With the exception of the pattern-maintenance phase, these movements involve changes in the state of the system. Pattern-maintenance acts are those which express or maintain institutionalized value patterns, which means they simply maintain the existing patterning of the system units. Hence they do not constitute change of the system, but rather, leave it in the same patterned state. In this sense they are "latent" acts; they constitute the maintenance, or implementation, of pattern rather than integration, adaptation, or goal attainment, all of which involve changes of system state.

As noted above, phases are regarded as changes in the state of the system. Technically, a specification of system state requires the measurement of the values on all four variables. Similarly, the description of a change of state requires the measurement of changes in the values of all four variables. For purposes of convenience, however, the phases are named according to the major dimension of movement. Although anything an actor does may have appreciable elements of more than one phase, it is described in terms of its primary effect.

Each phase is defined by a combination of four pattern-variables, two of which refer to the way in which actors categorize objects in activity appropriate to that phase, or which define the goal of activities in that phase, and two of which refer to the kind of attitude toward objects held by actors in that phase. To put this another way, types of overt activity are categorized according to the system problem to which they are addressed. Acts addressed to each system problem are, in turn, marked by characteristic attitudes and object meanings which are described by the pattern-variables.

Classification of Units of Structure

The primary basis of differentiation in social systems, then, is functional. This applies not only to discrete acts but to the status role as well. When a particular type of activity comes to be expected of a particular status, then one may speak of a functionally differentiated role. In effect, Parsons is saying that any given act, or role, can be described in terms of two analytically distinct variables; (1) an attitudinal, or orientation, variable, and (2) a modality, or object meaning, variable. Orientation refers to an actor's relationship *to* objects in his situation. It concerns the basis of his interest in, or his need for relating to objects. Since orientations to objects are conceived as structured, or patterned, there are elements of consistency, order, or coherence among orientations to different discrete objects and classes of objects, and it can be said that these orientations describe the kinds of problems in which the actor has an interest. Modalities, on the other hand, concern the meaning of the object *for* an actor. The meaning of an object for an actor is not given in the nature of the object itself, but is defined by the value of the object to the actor in the process of action.

Each of the two variables has four values which define alternative patterns. These patterns are values in terms of which the orientations of actors to objects, and the meaning of objects for actors can be discriminated, or measured. The four values, or alternative patterns of the orientation variable are: (1) an interest in instrumental utilization, defined by the pattern-variables specificity and neutrality; (2) an interest in consummation, defined by the pattern-variables specificity and affectivity; (3) an interest in affiliation, defined by the pattern-variables diffuseness and affectivity; and, (4) an interest in commitment, defined by the pattern-variables diffuseness and neutrality. (See FIGURE 2)

The alternative pattern values on the object-meaning variable are (1) means objects, or objects of utility, defined by the pattern-variables universalism and performance; (2) goal objects, or objects of cathexis, defined by the pattern-variables particularism and performance; (3) objects of inclusion, common membership, or identification, defined by the pattern-variables particularism and quality; and, (4) objects of generalized respect, defined by the pattern-variables universalism and quality. To define an object as an object of utility is to discriminate it from other objects in terms of the properties it has in common with other objects independent of its relation to the actor (universalism), and in terms of what it does, what can be done with it, or what effects it produces (performance). To define or categorize an object as a goal

Figure 2

CATEGORIES OF ORIENTATION TO OBJECTS

	AFFECTIVE NEUTRALITY	AFFECTIVITY
SPECIFICITY	Interest in Instrumental Utilization	Interest in Consummation
DIFFUSENESS	Interest in Commitment	Affiliation

object is to discriminate it from others in terms of what it does, or what can be done with it, or what effects it produces, in relation to the actor or a relational system of which he is a member (particularism). To see an object as an object of utility is to regard it as an object to be used as a means to an end. To see an object as a goal object is to see it as an end in itself, an object to be enjoyed, possessed, or consumed. To define an object as an object of identification is to discriminate it from other objects in terms of what it is, apart from what it does (quality) and in terms of its relation to the actor (particularism). To regard an object as an object of identification is to emphasize its belongingness in a relational system with the actor. Finally, to identify an object as an object of generalized respect is to emphasize its status in a class of objects independent of its relation to the actor, and in terms of what it is. Such an object is one to be regarded as a given, independent of what it does, what pay-off it has, or what relation it has to the actor. (See FIGURE 3).

COMBINATORIAL PROCESSES

The outcome of a phase of action process in which units orient instrumentally and categorize objects in terms of the effects they produce independent of their own interests is the production of generalized facilities that can be utilized in processes of goal-attainment, i.e., the production of utilities. Action processes are combinatorial processes, i.e., processes in which the contributions of units are combined to yield an output.

Figure 3

CATEGORIES OF MEANINGS OF OBJECTS FOR ACTORS

	UNIVERSALISTIC	PARTICULARISTIC
PERFORMANCE	Object of Utility	Goal-object
QUALITY	Object of Generalized Respect	Object of Identification

Hence, when the processes characteristic of the adaptive phase come to be the function of a specialized unit, the unit specializes in the relevant combinatorial processes which lead to the production of utilities. The production of utilities as an output defines the goal of the unit.

Similarly, the outcome of a phase of action in which units maintain a consummatory orientation and categorize objects in terms of the effects they produce in relation to the actor, is a combined output which takes the form of collective action in the interest of system goals. Again, when these processes become the special function of a differentiated unit, its goal is the production of effective collective action in the interest of system goals. The same point may be made with respect to the other two phases. The output of a phase, in which the orientation is diffuse-affectivity, and objects are categorized as objects of inclusion, is solidarity. And the output of a phase in which commitment is the orientation, and in which objects are categorized as objects of generalized respect, is respect for the cultural patterns which define the structure of the system.

In securing the resources to be combined in the production of its output, the unit, which at a lower level of analysis is regarded as a subsystem, orients to, and categorizes objects in terms of the pattern-variables appropriate to its function, and in turn, is oriented to and categorized in a like manner.

In terms of the discussion in CHAPTER 1, we can say that since there are two variables, each of which can take on any one of four values, there are 16 possible configurations of values that are obtainable through combining them. In Parsons' view, however, these are not logically independent variables. They are alternative ways of describing either the type of action characteristic of a given phase, or the output of a unit specializing in that function. Specificity-neutrality and universalism-performance are two different ways of identifying processes and units which contribute to movement along the adaptive dimension, or which contribute to the solution of the adaptive problems of the system. Specificity-affectivity and particularism-performance, diffuseness-affectivity and particularism-quality, and diffuseness-neutrality and universalism-quality are respectively associated with the goal-attainment, integrative, and pattern-maintenance problems of the system. Either of these variables, then, provides the basis for classifying the units of a system, say of an organization, in terms of the system problem to which they contribute. A role characterized by an instrumental interest in objects, and which produces utilities, is an adaptive role. A role characterized by consummatory interest, and by the production of goal objects is a goal-attainment role, and so on.

STRUCTURAL RELATIONS

One may use the variables discussed above to describe any given unit of a system in relation to the system of which it is a part. That is, on the basis of either the orientation or the object-categorization variable, one may categorize a given role as adaptive, integrative, etc. But systems, in the present sense, always involve at least two units, an actor who is also an object, and an object which is also an actor, and neither of these variables speaks to the question of how the units are organized to constitute a system, i.e., how the units are organized in relation to one another.

The concept of organization is widely used and, for the most part, poorly defined. However, the treatment given to it in connection with information theory is not only clear and useful, but also far more general in applicability than semantic habits associated with the concept of information would lead one to guess. For purposes of illustration let us return to the E=RI example used in CHAPTER 1. If both E and I are continuous variables, and if we have no knowledge concerning a relation between them, then the number of different combinations of E values and I values that might occur is, in principle, infinite. But, given the E=RI formula, not all value pairs are compatible with it. If the E value is given, then the I value can no longer range over the whole set of possibilities. It is restricted to a value such that the product of it and R is equal to the value of E. Thus, the law stating the relation between the variables changes the situation from a state of complete disorganization to a state of organization. There is a change from no organization to a high degree of organization.

We have a similar kind of organization holding between the orientation and modality variables in the above discussion. Now, however, we are concerned about organization at a higher level. The first level is that between two variables characterizing a given entity. The second, with which we are now concerned, is that between entities. Let us borrow another illustration from Rothstein (1958). Consider a two-person game. There is a set of alternative moves that player A may make, and a set of moves that player B may make. The question is, "In what sense is the game organized, or what is the relation between A's moves and B's moves?" Organization enters into this situation in the fact that each player must take account of the moves of the other player. Player A does not select randomly from the set of alternatives available to him, but selects in accordance with what B does, or is expected to do, and vice-versa. This is a kind of organization, or system, to which we shall return. For present purposes another kind is more relevant.

As Bronowski (1961) has put it, games are natural models for all purposeful activities. They are goal-seeking activities with rules. Thus, the game referred to above is organized in a second sense in that it is governed by rules. Not only do the players select from alternatives in such a way as to take account of what the other has done (process system), but the number of alternatives from among which they may select is restricted by rules which define legitimate and illegitimate means of attaining the goal of winning (structural system). Thus, in Parsons' terms, a social system is not characterized solely by interests in objects, and the goals of phases or units; it is also an *organized* system in which units share institutionalized norms (rules) which discriminate between legitimate and illegitimate modes of action in the pursuit of goals. In Parsons' own words:

> In social structure the element of "patterned relation" is clearly in part "normative." This is to say that from the point of view of the unit it includes a set of "expectations" as to his or its behavior on the axis of what is or is not proper, appropriate, or right. From the point of view of other units with which the unit of reference is in interaction, this is a set of standards according to which positive or negative sanctions can be legitimated. (Parsons, 1961, p. 223.)

The laws relating social entities, or the variables describing social entities, are normative laws precisely in the legal sense, though far from all norms are part of the formal legal code. In discussions of scientific laws, laws of the legal variety are often referred to as examples of what scientific laws are not. In view of the present discussion, this seems misleading, for both types of laws function in the same manner to organize relations among variables, or properties of entities. There appears to be no fundamental difference between a law which reduces the number of alternative values that a variable such as electrical current can take on, and one which reduces the number of alternative courses of action open to social actors with given properties. Like physical laws, norms are conditional statements. They specify that, if a social entity occupies a certain status in a social group or relationship (has certain properties), and if a certain type of situation arises (under specifiable conditions), then the entity is expected to behave in certain ways in relation to other entities. If one takes the point of view of an observer, then the laws which organize relations among social entities are, in principle, no different from those which organize relations among physical entities.

To say that relations among actors are organized by shared norms without discriminating alternative types of norms (or values on the norm variable) is much like saying that the relation between electrical potential and electrical current is organized by the resistance of the conductor without indicating either what values the resistance variable may take on, or what changes in the relation between potentials and current are associated with changes in resistance. In both instances, one is saying that the relations between two variables are organized by some unknown function of a third factor which varies in unknown ways. A more directly analogous situation would be that in which one could say that the gravitational attraction between the earth and the moon is an unknown function of the distance between the two entities without being able to say how changes in that variable relate to changes in the relation (distance). What is being related in this instance, of course, is not the two entities in their undifferentiated wholeness, but specific properties of the entities, i.e., their positions. Similarly, in the case of social actors what is being related is not the individual persons in their undifferentiated wholeness, but those specific properties described in terms of the orientation and modality variables. The relations between two actors described in terms of those variables are conceived to be a function of the system problems. A differentiated set of norms is conceived to organize relationships among actors in each of the four functional problem areas. There are two ways of putting this. One is to say that relations among actors differentiated around a given system problem are regulated by a differentiated set of norms. The other is to say that the norms governing relations among actors are differentiated according to system phase.

Norms can be stated either in terms of the functionally differentiated actor, or in terms of system phases. Thus, from the system phase perspective, we may say that (1) If the primary functional problem of the system is adaptation, (the production of generalized facilities) then actors are expected to adhere to norms which incorporate the universalistic categorization of objects and specificity of interest; (2) If the primary functional problem of the system is the attainment of a goal for the system, then actors are expected to adhere to norms which incorporate performance categorization of objects, and affective interest; (3) If the primary functional problem of the system is integration, then actors are expected to adhere to norms defined in terms of particularism and diffuseness; and (4) If the primary functional problem of the system is pattern-maintenance, then actors are expected to adhere to norms which call for quality categorization of objects and neutral basis of interest.[1]

Stated with a focus on the functionally differentiated actor, these become: (1) If the role of the actor is differentiated with respect to adaptation, then the actor is expected to adhere to norms which incorporate universalistic categorization of objects and specificity of interest. (2) If the role of the actor is differentiated with respect to the attainment of system goals, then the actor is expected to adhere to norms which incorporate performance categorization of objects and affective basis of interest, and so on. However stated, these are categories of norms governing the interactions of units in the system. They constitute the relational aspect of system structure. Stated abstractly, they organize relations among the properties in terms of which units are described. Stated more concretely, they organize relations among units with given properties. That is, given types of norms organize relations among a given type of units, or among units in a given phase. (See FIGURE 4)

We have noted that the primary basis of structural differentiation in social systems is functional, i.e., in terms of the primary contribution of the unit to the functioning of the system. A unit or a phase differentiated from others in terms of the adaptive function does not contribute directly to the attainment of system goals, but to the adaptive level which facilitates the attainment of a variety of system and unit goals. Thus, generalizations concerning system structure are derived from observations of system processes. Only to the extent that different kinds of processes crystallize around definite statuses and become subject to stable expectations for performance can we speak of structurally differentiated roles. It is the uniformities in the types of processes engaged in by different

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[1] This material is paraphrased from Parsons' "Pattern Variables Revisited," (1960b).

Figure 4

NORMATIVE STANDARDS REGULATING
INTERACTIONS AMONG ACTORS

Universalism Specificity	Performance Affectivity
Quality Neutrality	Particularism Diffuseness

units and in the norms regulating those processes on which structural analyses focus. Hence, the analysis of structure related above is one kind of abstraction from the basic behavioral data which are always observations of processes of interaction.

Classification of Process Units

A second kind of analysis can be made of these same data. Or, to put it another way, a second kind of abstraction can be made from these same data. We can focus on the interaction process as such in a manner parallel to that followed in the analysis of structure. The first parallel is that the same distinction between units and relations made above in the discussion of structure can be made in the context of system processes. Units of process in a social system are conceived as categories of input and output. There is conceived a flow of such inputs and outputs between the structural units of the system on the one hand, and between the system, through the agency of its units, and the environment, on the other. The normative standards discussed above are conceived as regulating these flows.

The prototypical case is the flow of transactions involving the exchange of things of "value," namely goods and services and money, which constitute a market process. The normative patterns, on the other hand, are the institutional patterns of defining money itself, the norms of contract,

> and the aspects of property other than money.... (Parsons, 1961, p. 224.)

The second parallel is that any given unit of process enters into system functioning in two principal ways. Just as the structural unit enters into system functioning both as an actor and as an object to other actors, units of process are on the one hand performances, or contributions to the solution to some system problem, and on the other hand, sanctions, positive or negative reactions to the performance of some other actor. Most units of process, then, are both a contribution to the movement of the system on one of the four dimensions, and a positive or negative feedback to an antecedent unit of process originating from another structural unit. These two aspects of the unit of process are formulated in terms of the same categories utilized in the differentiation of orientations and object modalities. Sanctions are categorized in terms of the orientation variable, and performances are categorized in terms of the object meaning variable. Accordingly, on the sanction side these are: (1) approval-disapproval, defined by the pattern-variable combination specificity-neutrality; (2) response, defined by specificity-affectivity; (3) acceptance, defined by diffuseness-affectivity; and, (4) esteem, defined by diffuseness-neutrality. On the performance side they are contributions to: (1) utility, defined by performance-universalism; (2) goal-attainment, defined by performance-particularism; (3) solidarity, defined by quality-particularism; and (4) respect, defined by quality-universalism.

The third parallel is that again, we can say that since there are two variables each of which can take on any one of four values, there are 16 possible configurations of values that are obtainable through combining them. But, as in the case of orientations and object meanings, these are not logically independent variables. They are alternative ways of describing exchanges. One focuses on the sanction aspect of the exchange; the other focuses on the performance aspect of the exchange. Specificity-neutrality and universalism-performance are two different aspects of, or abstractions from, the same unit of interaction process. In another sense, however, they are independent variable abstractions. A given unit of process can, for example, be either primarily a performance, or primarily a sanction. It can be directed primarily toward the solution of a system problem, or primarily toward an antecedent performance or sanction.

Either of these aspects, then, may be used as the basis for classifying units of process, say actions on the part of member units, in terms of the system problem to which they are directed. A unit of process characterized by a sanction component of approval, and a performance component of utility, regardless of the primacy of these two, is seen as a contribution to system movement on the adaptive dimension. But again, a process system involves at least two units of process, and neither of these two aspects of process speaks to the question of how a plurality of process units are organized to constitute a system, i.e., how they are organized in relation to one another. There are two aspects of this question which will be taken up in turn. One is the question of how two or more units of process of a given kind are organized in relation to one another. The other is the question of how two or more units of process of different kinds are organized in relation to one another. The first concerns the means by which units are compared with one another; the second concerns a temporal relation.

The units of system process, i.e., the categories of input and output, are defined in their two aspects by the performance and sanction categories discussed above. However, all processes of interchange in complex systems involve symbols which mediate the exchange process, which is to say that the basic processes of interaction are always some form of communication. Communication, in turn, involves two major aspects. On the one hand it is a process of transmitting and receiving messages. On the other hand, it involves a code in terms of which symbols have meaning. In order for actors to present one another with symbolic experiences, to encode and decode messages, the symbols must not only stand for something, but they must also stand for the same something for both sender and receiver. Moreover, the receiver must have confidence that the symbols do in fact stand for the things the sender alleges them to stand for. When the symbols stand for different things for sender and receiver, or when there is little confidence in what they stand for, effective communication is impossible.

RELATIONAL ASPECTS OF SYSTEM PROCESSES

We have indicated that units of process are categories of input and output, and that these, in turn, are categorized either in terms of the performance or sanction classifications according to whether the interest is in assessing the impact of the process on the system or on the structural unit. When we come to the relational aspect of system process it is the *relations among units of a given kind (or in a given phase) with which we are concerned.* We indicated earlier that the meaning of an object for an actor is not given in the nature of the object, but is defined by the *value* of the object to the actor in the process of action. Thus, utility, for example, is not a property of the object, but a value principle in terms of which objects have meaning, and in terms of which two or more objects can be compared. Thus, when we speak of relations between units of process, we raise the question of the *relative value* of the objects. To continue the economic example begun above, the measure of value in terms of which objects of utility are related to one another is monetary value. Money is a symbolic medium which functions in a dual capacity. It is a medium of exchange, i.e., a symbolic medium through which messages can be transmitted, and it is a measure of value, a code in terms of which messages have meaning. Money symbolizes the economic value, or utility, of objects.

The point made above concerning confidence in symbols can be illustrated in the context of monetary exchange. Money is a symbolic medium which stands for, or represents, the economic value, or utility, of objects. That is, under normal circumstances, money can be exchanged for commodities and services that have economic value. However, if money, which has no intrinsic value, loses its capacity to stand for commodities, i.e., if holders of money come to have little confidence that currency can be exchanged for commodities, then communication becomes difficult if not impossible until confidence is restored.

Money, then, is a specialized symbolic language by means of which messages (offers to buy and sell) can be transmitted, and a measure of value by means of which units of process defined as objects of utility can be compared. It is a standard in terms of which a number of performance contributions to system adaptation can be evaluated. But it is also a sanction. Its use is not a contribution to the solution of the system's adaptive problem, but a sanction toward antecedent attempts at the solution of the problem. Money expended by consumers of a firm's product is not only a contribution to the adaptive functioning of the society, but a sanction implying approval of the firm's performance. Refusal to purchase a firm's commodities is equivalent to disapproval of the firm's performance. Thus, money not only stands for the economic value of an object, but also reflects the extent to which that object is seen as a successful contribution to the adaptive functioning of the system. The accumulated money of an actor is at once a measure of his ability to command objects of economic value, and a measure of the degree of his success in contributing to the solution of the adaptive problem. Thus, the criterion of successful performance in the adaptive problem of a society is solvency.

In the earlier discussion of the pattern-variables and their utilization in the identification of unit and relational aspects of system structure, the objects of concern were objects internal to the system. In analyzing a system, however, one must also consider the environment within which the system is embedded. From the discussion of the system problems presented above, we may conclude that, among other things, any activity on the part of a member unit that is not merely an acting out of the basic value patterns governing the system is an external object. Any act on the part of a unit which is not a latent act, i.e., does not leave the system in the same patterned state, is an external object. It is not part of the system. The most important source of external objects of this kind are the personalities of member units, and the cultural system. In addition, however, there are both physical objects and other social systems with which the system of reference interacts.

It is precisely here that symbolic interaction processes become relevant. Through the use of media, external objects can be symbolized in terms of their significance for the functioning of the system. Interaction processes involve the symbolization of external objects, as defined above, in terms of their potential significance for the solution of the four system imperatives. Accordingly, there are four categories of symbolic media each of which is appropriate for one of the system phases. The defining characteristics of these symbols are formulated in terms of performance and sanction content in the same way that the defining characteristics of norms were formulated in terms of orientation and meaning content. They may be stated as follows: (1) In order to symbolize the adaptive significance of external objects it is necessary that the sanction component be affectively neutral, and that the performance component be an emphasis on what the object does. In short, the object must be symbolized in terms of what it does, or what can be done with it, independent of its potentialities for gratifying the unit. Such symbolization maximizes adaptation to environmental objects and is termed by Parsons "cognitive symbolization." It should be noted, however, that cognitive symbolization is a general term for which there is a number of specific interpretations, one of which is money as discussed above. (2) In order to symbolize the goal attainment significance of external objects it is necessary that the sanction component reflect a specific basis of interest, and that the performance component emphasize the potential belongingness of the object in the system (particularism). Parsons terms this "expressive symbolization." (3) In order to symbolize the integrative significance of external objects it is necessary that the sanction component of the symbol be affective, and that the performance component emphasize the qualities of the object. Parsons terms this "moral-evaluative categorization." (4) In order to symbolize the pattern-maintenance significance of external objects, it is necessary to combine a neutral sanction component, and a universalistic performance component. The term for this category is "existential interpretation."[2] (See FIGURE 5)

The four categories are viewed as functionally differentiated sets of symbols in terms of which actors may transmit messages. At the same time, they are viewed as measures of value in terms of which units of process of a given kind can be organized in relation to one another, both when units are viewed as performance and when they are viewed as sanctions. If the primary problem of the system at a given time is adaptation, then the communication of an actor concerning an antecedent act (an external object) of another actor should, in order to maximize adaptation, symbolize that act in terms of what it does independent of its potential for gratifying the actor(s). That is, the attitude expressed by responding actor toward the originator of the antecedent act should be affectively neutral. At the same time the performance aspect of his response should focus on what the prior response does, rather than what it is.

Recapitulation

Let us pause briefly to get our bearings before proceeding further. In the discussion above, we have identified a four-value orientation variable, a four-value object-meaning variable, a four-value norm variable, and a four-value symbolic media variable. We have also noted that the several values on these four variables are organized, i.e., a number of the potentially possible combinations are ruled out. With four variables, each of which can take on any one of the four values, there are 4^4 or 256 possible combinations of value. Of these there are only four permissible combinations of values on the four variables, and each combination defines a state of the system. Each of the four alternative system states is defined by an appropriate orientation, object meaning, set of norms, and symbolic media either for structural units differentiated around the four system problems, or for a given temporal phase period. That is, the four combinations of four values each describe either an act in terms of its functional consequences, an actor in terms of the function to which he characteristically contributes, or a temporal phase of the system. The norm-variable defines relations among structural units of a given kind, or during a given phase. Norms regulate relations among actors of a given kind, or during a given phase. Symbolic media define relations among units of process of a given kind, or during a given phase.

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[2] This material is paraphrased from Parsons' "Pattern Variables Revisited," (1960b).

Figure 5

CATEGORIES OF SYMBOLS MEDIATING
RELATIONS TO ENVIRONMENT

Performance Neutrality	Particularism Specificity
Universalism Diffuseness	Quality Affectivity

Another way to put this is to say that there are four general types of problems confronting social systems: (1) problems of adaptation; (2) problems of goal-attainment; (3) problems of integration; and (4) problems of pattern-maintenance. For each type of problem there is an appropriate type of performance, an appropriate type of sanction, an appropriate type of message, and an appropriate type of norm. From this point of view, norms regulate the relation between performances and sanctions, e.g., if you falsify income tax data you are subject to fine and imprisonment.

In FIGURE 6 these four variables are brought together. The four separate variables discussed independently above are placed in juxtaposition, and the combinations defining phases, functionally differentiated units, or activities, are located in the same cell of the four four-fold tables. That is, the adaptive (A) phase, activity, or actor, is defined by the upper left hand cells of the four juxtaposed tables, goal-attainment (G) by the upper right hand cells, integration (I) by the lower right hand cells, and pattern-maintenance (P) by the lower left hand cells.

These four combinations of values define a set of four relational patterns among units, and each member of the set is appropriate to the solution of one of the four functional problems. The explication of these patterns provided above is highly abstract and intended to have a variety of empirical interpretations (in that sense it is a general system). In order to speak of empirical systems, it is necessary to specify what one means by unit, norm, etc. The system among the variables is presumed to remain constant from context to context, but the definition of unit, symbol, etc., may vary. Thus, if the units which are parties to the exchange process are a business firm and an employee, then the goal, rules and media are of one kind, but if the units are members of a small group, then they are of another kind. It is important to bear in mind the fact that variables describe relational patterns, not permanent characteristics of entities. Concrete human individuals move into and out of relational patterns with a considerable amount of flexibility, but the relational patterns themselves may be abstracted from the concrete individuals and inspected as though they had an existence of their own.

An Illustrative Interpretation

It may be well at this point to provide an illustrative interpretation for the abstract relational patterns described above. In what follows, we shall devote a considerable amount of space to a discussion of the Parsonian analysis of society and its sub-systems. Our interest here is not primarily in the content itself, though that too is important, but in providing a concrete illustration of the approach in terms of relatively familiar subject matter, in order that the application of the same approach in a less familiar context will be more clear. The application of Parsons' ideas at the level of a society is more easily followed than, and hence provides a paradigm for, the analysis of organizations. Using a society as the system to be analyzed, we identify four functionally differentiated patterns, each of which includes an orientation, an object meaning, a type of norm, and a type of symbolic media. The first is a pattern in which (a) the basis of interest in objects is instrumental, or economic, (b) the relevant objects are defined as objects of utility and the goal output of the combinatorial process is goods and services having economic value, (c) the norms defining legitimate modes of action in the pursuit of that goal are the institutions of contract, property, and occupation, and (d) the media in terms of which external objects are symbolized is money. In Parsons' terms this relational pattern characterizes the adaptive phase, or unit, of a society. In more familiar terms, this is the economy, and the economy can, for certain purposes, be treated as an undifferentiated unit of the societal system.

The second pattern is that in which (a) the basis of interest is consummatory, (b) the relevant objects are defined as goal objects, and the goal output is the performance of binding obligations in the interest of system goal attainment; (c) the norms regulating the pursuit of the goal

Figure 6

THE COMPONENTS OF ACTION SYSTEMS

		INSTRUMENTAL Symbols Mediating Interaction			CONSUMMATORY Meanings of Objects	
EXTERNAL	External	Instrumental Performance Neutrality Cognitive Symbolization A	Consummatory Particularism Specificity Expressive Symbolization G	Performance	Universalistic Objects of Utility A	Particularistic Goal Objects G
	Internal	Universalism Diffuseness Existential Interpretation P	Quality Affectivity Moral Evaluative Categorization I	Quality	Objects of Generalized Respect P	Objects of Inclusion I
INTERNAL	Specificity	Neutrality Instrumental Utilization A	Affectivity Consummation G	External	Instrumental Universalism Specificity Means selection standards A	Consummatory Performance Affectivity Goal selection standards G
	Diffuseness	Commitment P	Affiliation I	Internal	Quality Neutrality Commitment selection standards. Paramount value patterns P	Particularism Diffuseness Affiliation allocation standards I
		Orientations to Objects			Standards Regulating Interaction	

(Adapted from Talcott Parsons, "Pattern Variables Revisited: A Response to Robert Dubin," *American Sociological Review*, August, 1960, 467-483.)

are the institutions of leadership, authority, and regulation, and (d) the medium in terms of which external objects are symbolized is power. Power is conceived as a medium parallel to money. Where money is a medium which serves as a measure in terms of which objects of utility can be related to one another, power is a medium which serves as a measure in terms of which obligatory performances can be related to one another. Similarly, where money is a medium which can be exchanged for objects of utility, i.e., goods and services, power is a medium which can be exchanged for goal objects, i.e., particularistic performances, or binding obligations in the interest of collective effectiveness. The accumulated money (wealth) of a unit is a measure of its capacity to command goods and services; the accumulated power of a unit is a measure of its capacity to command the fulfillment of binding obligations in the service of system goals. Money is expended through communicating offers to purchase goods and services. Power is spent through communicating decisions which are binding on units in the system.

The third pattern is that in which (a) the basis of interest in objects is an interest in affiliation, (b) the relevant objects are defined as objects of identification, or inclusion, and the goal is the production of solidarity, (c) the norms regulating the pursuit of the goal are those concerning the types of association of people with one another, the kinds of obligations assumed in making assertions, giving opinions and stating intentions, and (d) the medium in terms of which external objects are symbolized is influence. In Parsons' terms this is the societal community. Like money and power, influence is conceived as a symbolic medium in terms of which objects of identification can be related to one another. An object of identification, inclusion, or common membership, is one the significance of which is given in its membership or inclusion in the system, independent of its utility or goal aspects. Influence, then, is conceived as a measure of value in terms of which member objects can be compared with one another. Just as objects of greater utility have higher monetary value than objects of lesser utility, so do objects of greater membership have higher influence, or persuasive value, than objects of lesser membership. Moreover, influence is a medium which can be exchanged for membership, i.e., to influence, or persuade another is to give the other the status of member in a system involving persuader and persuaded. The accumulated influence of a unit is a measure of its capacity to command the acceptance of membership in a solidary system.

The final pattern is that in which (a) the basis of interest in objects is commitment, (b) the relevant objects are defined as objects of generalized respect, and the output is respect for the cultural patterns defining the structure of the system, or the maintenance of the pattern of the units of the system, (c) the norms regulating the pursuit of that goal are those governing the types of commitments that can be made, the kinds of obligations assumed in making commitments, the conditions under which commitments made in good faith can be broken and new ones assumed, and (d) the symbolic medium in terms of which units of process are related to one another is generalized commitment. An object of generalized respect is one the significance of which is given in its qualities, independent of which effects it produces, or what can be done with it, and independent of its membership in, or contribution to the system. Generalized commitment, then, is conceived as a medium in terms of which objects can be compared with one another on the basis of their value as objects of respect. Just as objects of utility have greater monetary value than objects of lesser utility, so do objects of greater respect have greater commitment value than objects of lesser respect. Moreover, just as money can be exchanged for objects of utility, generalized commitments can be invoked to secure respect from units. Finally, the accumulated generalized commitment available to a unit is a measure of its capacity to command performances in accordance with institutionalized values. (See FIGURE 7 for a schematic summary of this discussion.)

Thus, in Parsons' view, all social systems are organized in the sense that they are structurally differentiated around these four major problem areas. The structure of a social system consists of units and the patterning of the relations of the units. This structure may be divided into four components, two unit, and two relational.

> (1) Individuals in roles are organized to form what we call (2) collectivities. Both roles and collectivities, however, are subject to ordering and control by (3) norms which are differentiated according to the functions of these units and their situations, and by (4) values which define the desirable type of system of relationships (Parsons, 1959b, p. 26).

> For social systems the minimum unit is the role . . . and the minimum relation is that of patterned reciprocal interaction. . . . Higher order units of social systems are collectivities, i.e., organized action systems of the performances of pluralities of human individuals. . . (Parsons, 1961, p. 223).

> In social structure the element of patterned relation is clearly in part "normative." This is to say that from the point of view of the unit it includes a set of "expectations" as to his or its behavior on the axis of what is or is not proper, appropriate, or right. From the point of view of other units with which the unit of reference is in interaction, this is a set of standards according to which positive or negative sanctions can be legitimated. Corresponding to the distinction between role, and collectiv-

> ity for the case of units is that between norm and value for that of relational pattern. A value is a normative pattern which defines desirable behavior for a system in relation to its environment, without differentiation in terms of the functions of units.... A norm ... is a pattern defining desirable behavior for a unit or a class of units in respects specific to it and differentiated from the obligations of other classes (Parsons, 1961, p. 223).

These unit and relational aspects of structure are themselves functionally differentiated.

> Values take primacy in the pattern-maintenance functioning of a social system. Norms are primarily integrative; they regulate the great variety of processes that contribute to the implementation of patterned value commitments. The primary functioning of the collectivity concerns actual goal attainment on behalf of the social system. Where individuals perform *societally* important functions, it is in their capacity as collectivity members. Finally, the primary function of the role in the societal system is adaptive. This is particularly clear for the category of service, as the capacity to fulfill valued role-performances is the most basic generalized resource of any society, though it must be coordinated with cultural, organic, and physical resources (Parsons, 1966a, p. 19).

Each of these functionally differentiated aspects of structure is internally differentiated according to function. Thus, for example, within the general category of norms there is a differentiated sub-category which takes primacy in each of the primary areas of societal functioning, i.e., adaptation, goal-attainment, integration, and pattern-maintenance. The same generalization holds with respect to values, collectivities, and roles. In general:

> The primary basis of structural differentiation [in both the unit and the relational contexts] is functional, i.e., in terms of the primary contribution to the functioning of the system. This primary contribution [for the unit] is defined as the output of the goal-attainment boundary of the unit in question. Thus, a unit differentiated from others (i.e., specialized) in terms of adaptive function will not contribute directly to the system's goal-attainment but to the adaptive level which facilitates attainment of an indefinite number of specific system goals (Parsons, 1959a, p. 641).

When the system level is the society as a whole, the economy is a functionally differentiated unit which meets the adaptive needs of society; the polity, the goal-atttainment needs; the societal community, the integrative needs; and the unit emphasizing commitments, the pattern-maintenance needs. Roles, collectivities, norms, and values are the elements of structure differentiated around those needs. Each of these, as well as the inputs and outputs exchanged and the symbols mediating those exchanges, is in turn functionally differentiated.

Figure 7

COMPONENTS OF THE SOCIETAL SYSTEM

		INSTRUMENTAL Symbols Mediating Exchanges			CONSUMMATORY Meanings of Objects	
EXTERNAL	External	Instrumental Performance Neutrality Money	Consummatory Particularism Specificity Power	Performance	Universalism Goods and Services	Particularism Performance of binding obligations
	Internal	Universalism Diffuseness Generalized Commitments	Quality Affectivity Influence	Quality	Value Implementation	Solidarity
INTERNAL	Specificity	Neutrality Economic basis of interest	Affectivity Political basis of interest	External	Instrumental Universalism Specificity Institutions of property occupation contract	Consummatory Performance Affectivity Institutions of regulation authority leadership
	Diffuseness	Commitment basis of interest	Affiliation basis of interest	Internal	Quality Neutrality Institutions governing making of commitments	Particularism Diffuseness Institutions governing types of association
		Orientations to Objects			Institutions Regulating Interaction	

Values and Social Structure

We had occasion at several points in the above discussion to refer to values. However, since values are relevant to the description of a system as a whole in relation to its environment, and since we have been concerned with the internal differentiation of systems, there was no reason to consider them in detail. As a means of considering them more fully, let us pose the question, "Where do values enter into the analysis at the societal level as outlined above?" This question can be answered by pointing out that the basic pattern-variable framework (the orientation and object-modality combinations) must be applied on two levels in any given system analysis. One level is the description of the type of system being analyzed in terms of its paramount value pattern. The other is the analysis of internal structure and process as outlined above. Thus, in addition to the identification of adaptive, goal-attainment, integrative, and pattern-maintenance structures and processes within a system, we must also specify the type of system we are dealing with in terms of its paramount value pattern. Whatever the primary value pattern of the system, its focus will be in the pattern-maintenance sector, and all other processes will take their departure from that base line.

VALUES DEFINED

For Parsons, the main point of reference for analyzing the structure of any social system is its paramount value pattern. The value pattern defines the basic orientation of the system to the environment in which the system operates. It is relevant to the description of a system as a whole, but does not refer except by specification, to the normative standards which distinguish differentiated units within the system. Thus, social values are conceptions of the desirable type of social system to which members of the society are committed. They provide the standard for evaluating a social system as a total object, without reference to its internal differentiation or to the particularities of its environment. Social values are concerned only with the generic features of the relation of the system to the equally generic features of its environment. Though including the physical environment and other social systems, environment here also refers to the motivations and behaviors of the human individuals who are members of the society itself.

Differences in values in social systems can be formulated in terms of differences in the relative degree to which the functional problems are emphasized. That is, the system may emphasize (1) control of the environment in the interest of adaptation, (2) control of the environment in the interest of goal-attainment, (3) the maintenance of solidarity, or the harmonious adjustment of its units in relation to one another, or (4) the maintenance of the integrity of its value pattern, i.e. the maintenance of the pattern of its units. There are, then, four basic value patterns, one corresponding to each of the system problems.

The most fundamental feature of a value system is the order of priority which it confers on each of these problems. Rank ordering entails giving relative weights in the making of decisions to the four system problems. If we characterize systems according to the paramount emphasis, then we have the four major types mentioned above. However, since all four emphases must be present in some degree, then we may subdivide these four first-order types according to which of the remaining three problems is given second priority, and obtain 12 second-order types. Similarly, we may subdivide each of the 12 second-order types according to the relative emphasis given to the two remaining problems and obtain 24 third-order types. In what follows, we shall confine our discussion to the four first-order types.

FIRST-ORDER VALUE PATTERNS

One first-order value pattern is that in which the orientation is specific and affective, and the meaning of the society is defined by particularism and performance. As descriptive of the desirable type of society, this means that the good society is conceived as the consummation of the definitive state of the desirable. The good society, not necessarily the society as it exists, is an end in itself. The society should, in relation to its environment, be oriented to mastery over that environment in the interest of attaining the goal and once it has been attained, to its maintenance. On the first-order level, this pattern is exemplified in communist societies where the ultimate goal is the attainment of a pure state of communism. The good society, from this point of view, is one which mobilizes resources, among which the commitments of members occupy a key place, in the interest of realizing the consummatory state.

An alternative within the pattern is the passive exploitation of opportunities that arise in the natural course of events. The other alternative, discussed above, is active mastery of the environment in order to bring about the desired state. The emphasis on active mastery means that the good society is conceived as one which controls the environment through its own effective performances. The primary emphasis, then, will be on effective collective action in the interest of bringing about, and preventing the disruption of, goal states. This, in turn, leads to an emphasis on power, the capacity through effective performance to control the environment in the interest of a goal.

Applied to the individual and collective units of the society at a level above functional differentiation, the good unit will be conceived as one which, like the society, is committed to the attainment of the goal, and which contributes effectively to its realization. Where an alternative pattern, to be discussed below, emphasizes the utilization of rational means in the attainment of goals without specifying or evaluating the goals, the goal-attainment pattern defines the goals to be sought and evaluates units in terms of their goals without specifying the means to be utilized. Thus, with respect to its units, the goal-attainment pattern gives priority to the function of promoting system goals. Internally, this means high valuation of the goal-attainment function and high status for goal-attainment units, i.e., political and governmental roles and agencies.

The second pattern is that which, for Parsons, is exemplified by American society. In this case the desirable society is conceived as an instrumentality (specificity-neutrality) to ends outside of, or beyond, itself (universalism-performance). In relation to its environment, the desirable society is conceived as oriented to active mastery over that environment in the interest of goals (achievements) which are transcendental with respect to the society. There is no definitive consummatory state for the society as a whole, no ultimate societal goal to be attained as in the case of communism, but rather an indefinite commitment to progress, or improvement.

Again, if the emphasis is on the situational side of the relation, the primary emphasis will be active mastery of the environment, as opposed to passive adaptation to it. This leads to an interest in wealth, the generalization by the society of the maximum amount of fluid resources as means for the attainment of any goals valued by the society or its units. With respect to its evaluative implications for units, the pattern is fundamentally individualistic. In contrast to the emphasis on collective effectiveness in the goal-attainment case, it tends to emphasize autonomy and responsibility for units. Thus, the absence of a definitive goal state places the achievement emphasis on individual units, yielding a pluralistic goal structure in which units are free, within broad limits, to pursue whatever goals seem worthwhile.

The good unit, then, is also seen as oriented toward active mastery of the environment in the interest of goals which are transcendental with respect to it. The emphasis is on universalistic achievement, i.e., rational achievement based on objective understanding of the empirical conditions of action. The good unit is conceived of as one which performs in accordance with standards of technical efficiency which maximize universalistic standards in the adaptation of action to the intrinsic features of the situation. There is little emphasis on the appropriateness of the goal of the unit, only on the selection of the most efficient means available for the attainment of the goal. A necessary condition for rational action in this sense is scientific knowledge; hence, the good unit is one which possesses and utilizes knowledge of the consequences of alternative courses of action in the selection of the best means available.

The third pattern is that in which the good society is conceived neither as an instrumentality, nor as an end in itself, but as an object to be affiliated with and which maintains a relation with the environment which maximizes its own solidarity (diffuseness-affectivity and particularism-quality). The stock example in this case is Classical Chinese society with its emphasis on harmonious coexistence both internally and with the environment (principally the physical environment). In relation to the environment the society should discriminate between objects which are included and those which are excluded. Those which are included are to be treated as aspects of an objectively given, to-be-taken-for-granted, order. Acceptance of objects as given, as opposed to active attempts at mastery, is what is meant by traditionalism. The primary emphasis is not adaptation to, or the attainment of goals in relation to, the environment but adherence to, or conformity with, the standards deriving from its inclusion in a relational system with the environment.

Applied to units of the system, this pattern leads to a conception of the desirable unit in similar terms, i.e., as one affiliated with, and contributing to the maintenance of solidarity in relation to other units of the system. The good unit is one which affiliates with other units and conforms with, or adheres to, the standards imposed by virtue of its inclusion with other units in a common relational system.

Finally, the fourth value pattern involves a conception of the good society as committed to the implementation, or expression, of the values ascribed to it as a unit of a system that is transcendental with respect to it. The classic case is India with its other-worldly, transcendental religious orientation. Given the commitment to a source of legitimation which stands above both the society and its worldly environment, the primary emphasis will be on the maintenance of the institutionalized value pattern, and through that on the maintenance of the pattern of its units. On the other hand, if the discrepancy between the desired state and the existing state of affairs is too great, as in the case of pre-Nazi Germany, then there will be a secondary emphasis on the achievement of that state. Within this pattern, the desirable unit is conceived similarly, i.e., as committed to the implementation of the values ascribed to it in its status, independent of its relational ties with other units. The caste system of India is the classic illustration of the pattern.

VALUES AND INTERNAL STRUCTURE

Having identified the paramount value pattern of a given system, one can then proceed to the level of internal differentiation. As indicated above, this will involve the identification of primary structural subsystems, or units, norms, media, etc. There will be, according to this approach, a unit, or subsystem, oriented to adaptation, one to the attainment of system goals, one to system integration, and one to the expression and maintenance of the basic value pattern. The value pattern of the system, however, not only has implications for the relation of the system to its environment, but also for internal structure and processes as well. The most important internal implication is the order of priority the value pattern gives to the four subsystems. One of the four primary subsystems will directly embody the paramount value pattern and will be given most stress by it.

Thus, in American society the paramount value pattern stresses adaptation and hence places the greatest emphasis on the economy. In the USSR the paramount value pattern stresses goal-attainment, leading to an emphasis on the polity and power. In short, the paramount value pattern, which is directly relevant to the description of the system as a whole, will also establish internally the primacy of norms which have the relevant functions for the system. In the American case, the adaptive value pattern gives priority to universalistic achievement norms, which implies for units an expectation of achievement, not in relation to societal goals, but in relation to any worthwhile goal, so long as it contributes to the improvement of society. In the absence of a definitive societal goal, units, both individual and collective, are free within broad limits, to define their own goals. Whatever the goal, the primary obligation is to adapt one's actions to the intrinsic features of the situation in attaining it, i.e., to adapt resources to the ends sought, whatever those ends may be.

The absence of an over-riding system goal means that, except in times of national emergency, achievements in the service of the society (particularistic-performances) are regarded less highly than in goal-oriented systems. On the one hand, if there is an over-riding system goal, then the norm of contributing to the attainment of that goal becomes paramount, and a hierarchy of authority similar to that of a formal organization will be dominant. Unit goals will be secondary to, if not lower than, the system goal, and individualism of the American type will not be tolerated. A primary feature of the value pattern in both its internal and external consequences is its property of generalization. Whatever the paramount value pattern, it will not only give primacy to one of the four subsystems, but it will also be generalized to the other three so that the whole constitutes a coherent system. The American value pattern not only emphasizes adaptation and gives primacy to universalistic achievement norms, but also emphasizes health and education as prerequisite to achievement, de-emphasizes extended kinship patterns, etc. The entire society becomes organized, within the limits posed by the other functional imperatives, to maximize the dominant value. To summarize in Parsons' words,

> *Whatever* the type of value system, it is this which defines the ascriptive-quality base in terms of which the other aspects of its structure must be analyzed. Thus the general dimensional scheme we have outlined must be applied on *two* different levels, first to define the type of system with which we are dealing, and second, to analyze the internal differentiation of the system using this paramount value-pattern type as the ascriptive base from which to carry out the analysis (Parsons, 1954, p. 401).

> The first level of structural analysis is, we may say, the distinction of "primary" subsystem, i.e,, those which may be interpreted to constitute direct differentiation of the major system itself. There will, then, be one of these primary subsystems which is the one in which the paramount values are most directly embodied (Parsons, 1954, p. 399).

> There should be four primary subsystems, one oriented to system adaptation, one oriented to system goal-attainment, and one to the expression and maintenance (including socialization) of the institutionalized ascriptive-quality pattern-complex, i.e., a subsystem with primarily "cultural" functions (Parsons, 1954, p. 399).

Levels of Organization

Having placed our earlier discussion of the internal differentiation of social systems in the context of values, we may now return to that discussion. Before turning to an analysis of subsystems, however, it is necessary to consider the matter of levels of organization within a social system. In Parsons' view, the analysis of the structure of large scale, complex societies requires the systematic differentiation of four levels of organization. (Note that the term "organization" here does not refer to an entity.) The four levels, which Parsons terms the technical, managerial, institutional, and societal, constitute a structural hierarchy which extends from the most highly unified level at the top to the most highly differentiated levels at the bottom. At the lower level structure is provided by roles, i.e., the normatively regulated performances of categories of human individuals. At the next level roles are aggregated to form collectivities, i.e., an organized system involving the coordinated action of a plurality of individuals in roles oriented to the attainment of a collective goal. Collectivities are always the agencies through which societal functions are performed. Persons in roles perform functions in collectivities, and for collectivities, but not directly in or for societies. Roles and collectivities, however, are in turn regulated by higher orders of institutionalized norms. Not only are occupational roles, for example, organized into specific function collectivities, but also these collectivities are regulated by generalized institutions, e.g., the institutions of contract, property, authority, etc. Finally, at the top of the hierarchy, the system is organized as a total system, i.e., as a single political collectivity governed by a single more or less integrated system of values.

There are, according to Parsons, four respects in which these levels constitute a hierarchy: (1) The generality of the normative patterns governing levels increases at each level of the hierarchy. At the lowest level, the patterns apply only to special categories of units. At the highest level, they apply to the entire society. (2) The area of impact of decisions increases from narrow to broad with higher levels in the hierarchy. Thus the impact of decisions made in a given family is relatively narrow, while that of the decisions of a business firm is much broader. Broader still is the impact of decisions made by fiduciary bodies and national policy-making bodies. (3) The facilities utilized become increasingly general at each level in the hierarchy. (4) The inclusiveness of the range of solidarity increases with each level of the hierarchy. The solidarity of a technical level involves only a small group of people, while that of an occupational organization, a community, and the national community becomes increasingly inclusive.

> A "technical" or "primary" social system typically is a unit in a differentiated system and as such "produces" an output of significance to other units and to the society as a whole. It is also, of course, itself the recipient of inputs from other primary subsystems. This is true at the other levels of organization, but, as we shall see . . . it is essential to differentiate the input and output categories which are relevant at the different levels. I may distinguish four categories of primary-level output as follows: (1) physical production in the economic sense, i.e., of commodities; (2) administrative implementation of authoritative decisions; (3) integration of units in social systems; and (4) maintenance or creative modification of motivational or cultural components of the social system (properties of units) (Parsons, 1959c, pp. 10-11).

These four primary-level outputs clearly correspond to the four functional problems discussed above. These are the outputs of primary level operation in the four functional areas discussed above. There are, then, within each of the four functional areas, relatively small solidary groups of persons utilizing primarily physical facilities, and making decisions which affect limited numbers of people. But technical level systems cannot subsist alone in highly differentiated society. They must be articulated with other units in a wider system. Especially where resources are highly mobile there must be some articulation with a higher, or managerial, level of organization. Primary level functions concern the technical processes of physical production, decision implementation, etc., and the primary problems of the technical level are those imposed by the nature of the technical problem itself.

But technical personnel do not necessarily have access to the facilities required for the performance of their functions, and the question of what it is that they are to produce for whom is often problematical. Thus technical levels come to be controlled and serviced by higher-order administrative, or managerial levels.

> It is clear, then, that there must be institutionalized mechanisms by which the necessary exchanges of inputs and outputs are implemented and regulated. In the simplest cases, these need not involve distinct organizations at either role or collectivity levels, but with general increase in level of differentiation and the concomitant "mobility" of the resources involved in such exchanges, there is a strong tendency to develop differentiated role and collectivity structures which specialize at this level and which are not identical with the technically operative systems. Thus, in a modern economy, the "business" organization which is concerned with marketing, procurement of materials and personnel, and the like is apt to become clearly differentiated from the "plant" which is the organization devoted to physical production. Similarly, in a modern university or hospital there tends to be an "administration" which is engaged not in teaching and research as such or in care of patients but in "servicing" the faculty or staff engaged in these functions. (Parsons, 1959c, p. 11).

The principal foci of managerial level operation are threefold: (1) disposal, deciding what and how much to produce for whom and on what terms; (2) procurement, the acquisition of facilities, materials, personnel, and supplies required for the performance of technical services; and, (3) control and supervision of technical level operations.

Like technical level of organization, the managerial level is seldom left uncontrolled. As Parsons has noted:

> A particularly conspicuous phenomenon in our society is the institutionalization of some kind of fiduciary board, of "directors" or of "trustees" the members of which are given certain responsibilities and

> prerogatives *vis-a-vis* the organization which in some sense are superordinate to those of persons below them. Typically, "managers" or "administrators" are persons employed full time, whereas directors or trustees are likely to be "laymen" so far as the organization itself is concerned. I suggest that such boards constitute a primary form of what I call the institutional level of organization in our society. (Parsons, 1959 c, p. 14).

Finally, the societal level provides a single focus to which all the primary level problems may be brought. Government at the national level provides the framework for organization at this level through supervisory, regulatory, and supportive activities relative to lower levels of organization in all four functional areas.

Let us now return to the discussion of the functional side of internal structure and process. We observed above that the value pattern of a system establishes an order of priority among four alternative functional emphases. It may emphasize control of the environment in either the adaptive or goal-attainment contexts, or it may emphasize acceptance of the environment as an element of a given order in either the natural or transcendental contexts. Whatever the paramount emphases, all four emphases will be present in some degree, and the general tendency is for structural differentiation to occur in terms of specialization in the solution of the four functional problems. This is to say, whatever the paramount emphasis, every society, whether or not its paramount interest is goal-attainment, will be oriented to the attainment of some goals. In the least goal-oriented societies, national defense is a collective goal. Similarly, in the most goal-oriented society, there will be a problem of securing and producing resources which can be utilized as facilities in the attainment of the goal. A society which was not organized for the production of utilities could not possibly attain a paramount goal.

The difference between the goal-oriented society and the adaptively oriented society is not a difference that can be characterized in terms of having a single collective goal on the one hand, and no collective goals on the other. The difference can be characterized in terms of there being a paramount collective goal to which all other collective and unit goals are subordinated on the one hand, and there being a plurality of both collective and unit goals on the other. The primacy of goal-orientation in a society such as the USSR means that that goal takes precedence over alternative goals such as the attainment of a high standard of living for citizens. This, in turn, does not mean that there is no problem of producing resources which facilitate goal-attainment, but that the range of facilities permitted is much narrower than in some societies, and that the resources produced need not be so highly generalized. Hence, the predominant emphasis in Soviet economic development, at least until very recently, has been in those areas which contribute most directly to military prowess. Far less emphasis has been placed on the production of goods which facilitate the attainment of other types of collective and unit goals. In the United States, on the other hand, with the exception of periods of national emergency, the emphasis has been on the production of highly generalized utilities in order to facilitate the widest possible variety of unit goals. Collective goals have been relatively unimportant. In time of war, however, the emphasis on generalized facilities shifts dramatically. Production of automobiles and a variety of other consumer goods is curtailed or halted, and the resources produced are those required to prosecute the war.

The second step in the analysis, then, after the identification of the paramount value pattern, is the identification of the four structural units, or subsystems, differentiated around the four functional problems. There will be a subsystem whose goal is to solve, or to contribute to the solution of, the adaptive problem of the society, one whose goal is to contribute to the solution of the goal-attainment problem of society, and so on. What are alternative value patterns for the society are differentiated goals for the several subsystems. Thus, the production of utilities is the goal of the economy. Or, to put it another way,

> The economy may be defined as the society so far as it can be conceived as organized for the production of utilities, or wealth or income—(the differences are those of perspective). Seen in this way its primary goal-orientation is *production* of goods and services (as demanded by other subsystems of the society). (Parsons, 1958, p. 269).

This is the level of analysis described earlier, that in which attention was focused on the four primary functionally differentiated units, or subsystems of the society, the economy, polity, societal community, and pattern-maintenance, or cultural. The description included differentiated orientations, goals, norms and symbolic media. Thus, when the system of reference is the society as a whole, the economy, polity, etc., are functionally differentiated units. But since what is treated as a unit at one level of analysis may also be regarded as a system at another level, the economy, and other units, may be viewed as systems in their own right. Using the economy for illustrative purposes, this means first, that the economy will be subject to the four system problems on its own level; second, that the economy may be conceived as having a value system of its own, establishing an order of priority among the system problems; and third, that the economy may be conceived as a differentiated system with four units representing solutions to its system problems.

Societal Organization

Let us first consider the value system of the economy and its relation to the societal value system. A society is conceived as characterized by a paramount value pattern, a conception of what is desirable for the society itself as a whole system, or as a total undifferentiated object of evaluation.

> The paramount value system is relevant to the description of the society as a whole, but does not distinguish normative judgments which refer to differentiated parts or subsystems within the society. Therefore, when a difference of values is imputed to the two sexes, to regional groups, to class groups, and so on, one has gone from describing societal values to describing those that characterize another social system, one which should be treated analytically as a subsystem of the society of reference. When this step has been taken, it becomes essential to make another distinction, the distinction between value and differentiated norm. (Parsons, 1960a, p. 122).

The paramount value pattern, while relevant to the evaluation of the society as a whole, is differentiated through a process of specification to constitute values for the various subsystems of the society. Specification leads to the conception of desirable types of subsystems within what is evaluated as the good society. These judgments are specifications, or applications, of the general principles embodied in the societal value system, to the more specific case of a given subsystem with a given functional place in the society.

Thus, in Parsons' words:

> . . . to be treated as a subsystem, a complex of interactive relationships must be treated as having an institutionalized (more or less, of course) value system *common* to its members. This value pattern of the subsystem system must be treated as a *differentiation from* the common value system of the society as a whole. Its direction of differentiation is defined by the primary function of the subsystem for the larger system of which it is a part. Thus we may say that a business firm is a subsystem which belongs primarily to the "economy" as that subsystem of the total society which has the function of facilitating its adaptive processes, through "production" increasing the supply of disposable possessions, i.e., "wealth." The primary function of the firm (from the point of view of the society) is to "produce" one or a class of goods or services. The common value system of its participating members, the management, technicians, workers, etc. in their roles as employed by the firm, is a "spelling out" in a more specific context of the general universalistic-achievement value system of the society. (It is the case of "economic rationality.") Or, to take another example, a university belongs in the first instance to the cultural subsystem of the total society; its primary function is represented in the "latency" cell [pattern-maintenance]; it is the maintenance (hence transmission) of certain basic values of the

> society in the fields of "learning," and their creative further development. Secondarily it produces new facilities which can be put to technological or other "practical" use, in the form of new knowledge and of the skills of people trained by its agency. This is a differentiation from the main overall value system in the direction of implementing those which are pattern elements relatively independent of specific and temporary situations yet which are necessary to stabilize and develop *this type* of society. Again all those who have roles in the university, faculty, administrative officers, students, and even buildings and grounds personnel, to some degree share this subsystem value system, *in these roles.* (Parsons et al., 1955, pp. 160-161).

For Parsons, then, every society is characterized by a paramount value pattern which is a conception of the desirable type of social system to which its members are committed. The value patterns of societies differ with respect to the order of priority given the four system problems, but all societies tend to differentiate internally around the same four problems. Thus, while societies may differ dramatically with respect to values, they tend to be alike in that the same structural components are present.

> A society, as an ongoing system must, so far as it becomes sufficiently differentiated, develop subsystems . . . which meet all of its functional requirements as a system . . . societies differ from each other in the degrees and directions of their differentiation and they differ in the ways in which the structural components are organized to constitute the system, but *at a given level of differentiation they do not differ in what structural components are present or absent.* (Parsons et al., 1955, p. 161).

Thus, in all societies at a comparable level of differentiation, there are business firms, governmental agencies, hospitals, schools, universities, families, etc. But the degree of development in the several functional areas, and the manner in which these components are organized to constitute the system differs as a function of the value pattern. That there are business firms, governmental agencies, etc. in the USA, USSR, India, China, Japan, and so on is obvious. It is equally obvious, however, that these components are not organized in the same manner in any two cases. The basic function of the business firm, wherever it is located, is the production of goods and services, but the conception of what constitutes a good business firm will differ in each case, as will what specific goods and services the firm is to produce, how it is to secure its resources, and how it is to be integrated into the society.

Like the physical scientist, Parsons has asked, "What are the constituent elements of a society, and how are they combined to make a society what it is and not something else?" His answer is clear. The constitutent elements are the same; they are collectivities and roles organized differently according to values and norms. The same is true with respect to processes. The same basic processes characterize all social systems, but these too are organized differently to constitute a system.

THE ECONOMY AS A SUBSYSTEM

As in the case of a society, the value system of the economy regulates the relation between the economy and its environment, which in this case is principally the other three subsystems of the society. Again, like the society, the economy has a goal, or goals (identified above as the production of goods and services for consumption); it also has an adaptive problem, i.e., it must secure generalized resources which can be utilized as facilities in the process of production; it must maintain some degree of stability and harmony with other units of the society; and it must implement and maintain its commitment to the values ascribed to it in its status as a unit in the societal system-action environment.

> Its primary adaptive problem is that of capitalization. . . . Its integrative problem concerns the institutionalization of basic economic relationships, industrial organization and occupational roles as the modes of channeling motivation and facilities of production, property as rules governing the relations of holders of the factors of production to each other, and to others in other subsystems. Finally, the economy is governed by a special value system of its own, that of "economic rationality." This is a differentiated subsystem of the value system of the total society, which in our own case gives particular relative prominence to economic values. (Parsons, 1958, p. 296).

As a normative standard governing the relation between the economy and its environment, economic rationality is primarily concerned with the problem of choosing the ends to which scarce resources are to be allocated. In general, rationality involves the adaptation of action to the intrinsic features of the situation. This, in turn, involves a neutral assessment of the specific properties of objects, the categorization of objects in terms of their common properties, and an emphasis on the probable effects the object will produce. On the technological level, this leads to the adaptation of means to ends in such a way as to approach the most efficient manner of achieving the end. That is, technological rationality consists of choosing the best, most efficient, means to a given end.

Economic rationality, however, concerns the problems of choosing among, or allocating resources among a plurality of alternative ends. In so far as economic action is rational, it will be adapted to the intrinsic features of the situation. Since the situation of the economy is primarily the other subsystems of the society in their capacities as consumers, it is the wants and demands of the other subsystems to which the economy must adapt. Thus,

> In the present terminology there could well be a rational technique even of achieving ends which no one desires. It would for instance, be possible, as a kind of technical amusement, to apply all the most modern methods to the production of atmospheric air. And no one could take the slightest exception to the purely technical rationality of the action. Economically, on the other hand, the procedure would under normal circumstances be clearly irrational because there was no demand for the product. (Weber, 1947, p. 162).

Since there is always a variety of wants to which means might be allocated, and since resources are inherently scarce, the general problem of economic action is maximizing want satisfaction, i.e., the production of utility, at minimum cost. In the case of the economy, the relevant wants are those of consumers and rationality concerns the maximization of production at minimum cost.

The paramount value pattern of the economy gives primacy to adaptation to the external situation, both in the sense of adapting to its uncontrollable features, and in the sense of actively controlling it. The control sought, however, is not in the interest of attaining a definitive goal, but in the interest of putting the economy in a position to achieve any goal that may become of interest. The interest is in exploiting only those opportunities which improve the adaptive position, i.e., the level of capitalization, of the economy. The other three problems, then, will be subordinated to this paramount value emphasis. Goal-attainment, production, will necessarily be a problem, but only those production goals will be sought which, in the long run, enhance the adaptive level of the economy. Rational economic action proscribes the expenditure of resources on the attainment of goals that tend to impair the adaptive flexibility of the system, i.e., those that do not yield a profit. Another way of putting this is to say that the paramount value emphasis of the economy calls for a relation with the environment that will maximize the level of capitalization of the economy. According to our earlier discussion, this implies that while goal-attainment, integration, and pattern-maintenance will be included in the order of system priorities, they will be subordinated to adaptation. Thus, while the economy will necessarily emphasize effective performance in response to environmental opportunities and demands, in so far as the attainment of a given goal does not enhance the adaptive level of the economy, it will be abandoned.

Though the paramount value emphasis of the economy is not the maintenance of a relation with its environment which enhances its own solidarity, it must, nevertheless, maintain some minimal level of integration with other units of society. Integration depends on the institutionalization of the paramount value pattern in the normative rules governing the basic economic relationships, i.e., contract, property, etc. These are relational patterns which avoid commitments to solidarity which would impair the adaptive flexibility of the economy through the emphasis on specificity of interest and the impersonal application of universalistic standards.

Finally, although the paramount emphasis of the economy is on the improvement of its adaptive position, subordinating goal-attainment and integration to that interest, there must also be some emphasis on pattern-maintenance. As a paramount value emphasis, pattern-maintenance calls for the maintenance of commitment to, and the implementation of, the values ascribed to the unit in its status as a unit of a superordinate system whatever the cost in terms of integration, goal-attainment, and adaptation. This would imply the adherence to ascriptive obligations on value grounds alone, i.e., independent of whether there was a demand for them, independent of whether meeting the demand enhanced the adaptive level of the system, and independent of whether they were a source of conflict between the system and its environment. While this is clearly not the paramount emphasis of the economy, it is an essential element of its relation to its environment. The point can be clarified by noting that there is a variety of opportunities which, if exploited, would be economically rational in the sense of maximizing the production of goods and services at minimum cost. Prostitution, the production and distribution of narcotics, the sale of votes, etc., are examples of ends which, however rationally they might be pursued, are proscribed (with varying degrees of success). Thus, even though the primary value emphasis of the economy is rational adaptation to environmental demands, there are limits to economic rationality. The value pattern of the economy, or any differentiated unit, must imply basic acceptance of the values of the society. While it has an obligation to adapt resources to ends, it must do so within the limits imposed by societal values. The limits imposed, of course, apply not only to goals, but also to the acquisition of facilities for the pursuit of goals, and the integration of the subsystem with other units of the more inclusive system.

The ascription of values to a unit or a subsystem of a system is, on the one hand, a spelling out of the implications of the common value pattern for the operations of the unit, and, on the other hand, a specification of the system's commitments to its operation. Thus, the values ascribed to the economy as a unit of the societal system spell out the implications of the societal value system for the functioning of the economy. In the

American case, this leads to one kind of economy. In the Soviet case, it leads to quite another kind. At the same time, however, economic values define the societal commitments on which the functioning of the economy depends. That is, they provide on value grounds alone, for the allocation of a certain amount of societal resources to economic production.

INTERNAL DIFFERENTIATION OF THE ECONOMY

We might continue here with an analysis of the value patterns of the polity, societal community, and cultural subsystems, but our purpose is only to illustrate a third step in the analysis, that of identifying the value patterns of the differentiated subsystems. As indicated above, a fourth step involves the treatment of the four primary societal units as subsystems which not only have characteristic value patterns, but which also tend to become differentiated into subunits representing solutions to their functional problems. Finally, a fifth step in the analysis is to conceive of the four subunits of a given primary unit as engaging in an exchange of inputs and outputs with similarly differentiated subunits of the other three primary units. From the point of view of the given primary unit, these are external exchanges, or functions regulated by the value system.

If we now recall the initial discussion of functional differentiation in terms of differentiated modes of orientation, goals, norms, and media, it will be evident that the preceding discussion of the economy follows exactly the same outline with one exception. The initial discussion was concerned with the internal structure and processes of the societal system. In the illustrative discussion of the economy we were concerned with external relations of the differentiated subsystem. In the latter context we examined the four value emphases which, in some order of priority, structure relations between the system and its environment. From the point of view of the economy, these relational ties are the foci of the processes of input-output interchanges mentioned above. They also identify the four structural units of the economy. These may be identified as the investment-capitalization unit (adaptation), the production-distribution (goal-attainment) unit, the entreprenurial (integrative) unit, and the economic commitment (pattern-maintenance) unit. The location of these and their input-output interchanges with similarly differentiated units of the polity, societal community, and pattern maintenance subsystem are presented schematically in FIGURE 8.

A further step in the analysis focuses on structures and processes internal to the economy, or other subsystem. At this level each of the four units of the economy is treated as the economy itself was treated above.

Figure 8

INPUT-OUTPUT INTERCHANGES WITHIN THE SOCIETAL SYSTEM

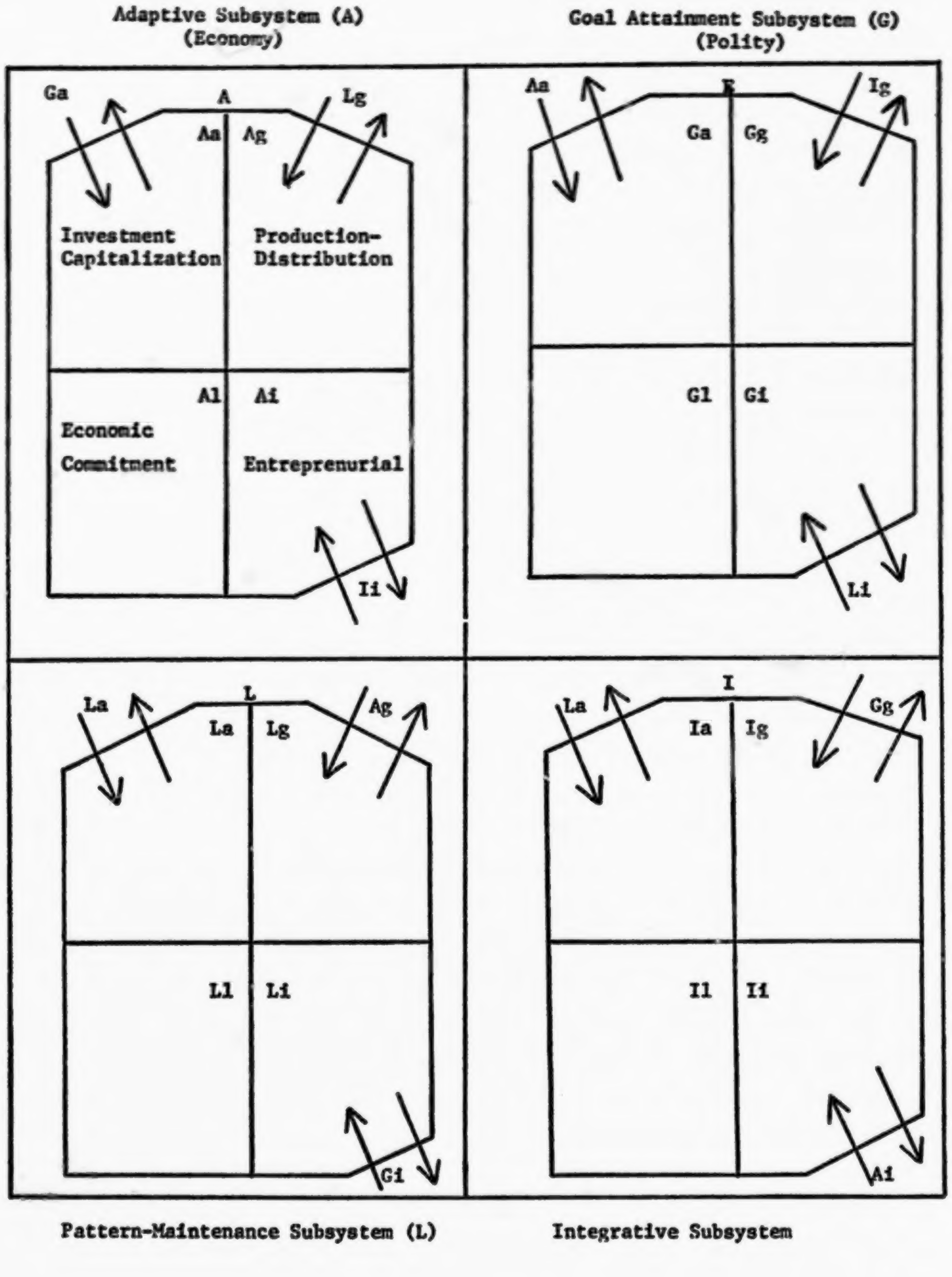
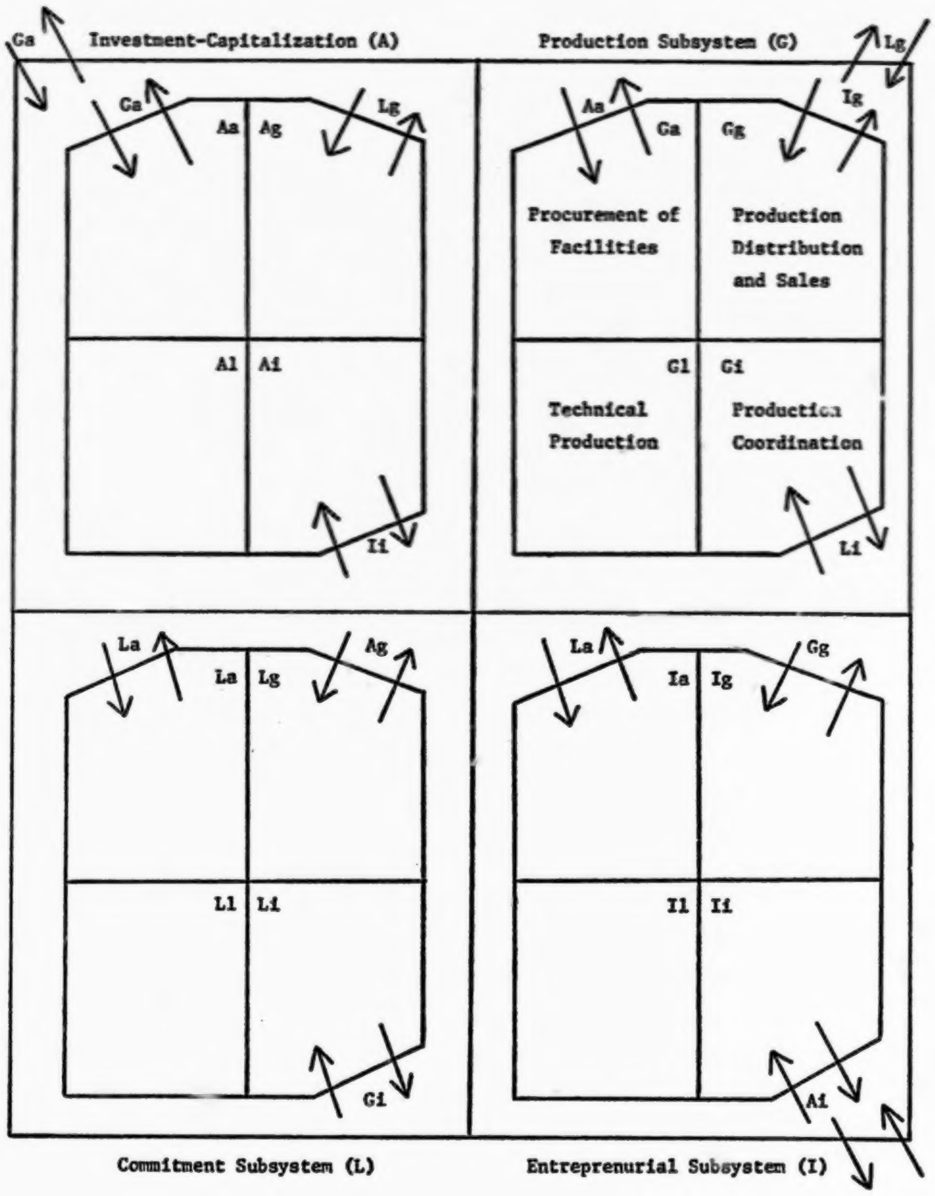

Adaptive Subsystem (A)
(Economy)
Ga
A
Lg
Aa
Ag
Investment Capitalization
Production-Distribution
Al
Ai
Economic Commitment
Entrepreneurial
Ii
Goal Attainment Subsystem (G)
(Polity)
Aa
G
Ig
Ga
Gg
Gl
Gi
Li
La
L
Ag
La
Lg
Ll
Li
Gi
La
I
Gg
Ia
Ig
Il
Ii
Ai
Pattern-Maintenance Subsystem (L)
Integrative Subsystem

Figure 9

INTERNAL AND EXTERNAL INTERCHANGE OF THE ECONOMY


Ga
Investment-Capitalization (A)
Production Subsystem (G)
Lg
Ga
Lg
Aa
Ag
Al
Ai
Ii
Aa
Ig
Ga
Gg
Procurement of Facilities
Production Distribution and Sales
Gl
Gi
Technical Production
Production Coordination
Li
La
Ag
La
Lg
Ll
Li
Gi
La
Gg
Ia
Ig
Il
Ii
Ai
Commitment Subsystem (L)
Entreprenurial Subsystem (I)

The production-distribution unit, for example, can at one level, be treated as a differentiated unit with an appropriate orientation, goal, etc., and at another level as a subsystem with a value pattern structuring its relations to the environment (which in this case is primarily the other three subsystems of the economy). These external relations of the four subsystems, however, are internal relations from the point of view of the economy, and while the value systems of all four subsystems will involve all four emphases described above, the paramount emphasis will be that appropriate to its function. Thus, the paramount value emphasis of the investment-capitalization subsystem will be adaptation, that of the production-distribution subsystem, goal-attainment, and so on. It may now be pointed out that orientations and object meanings, as discussed in the context of actors, are paramount value patterns regulating the relations of actors viewed as subsystems to their environments.

FIGURE 9 presents schematically the format of the analysis of internal input-output processes of the economy. The arrows at the corners of the outer box represent the inputs to and outputs from the economy portrayed in FIGURE 8. It is also possible, of course, to analyze the economy from the point of view represented by FIGURE 6, i.e., to analyze the orientations goals, norms, and symbolic media.

CHAPTER 3

Applications in The Study of Organizations

Before shifting the focus of attention to a new level of analysis let us summarize some basic elements of the Parsonian model in the simplest terms possible. Imagine two men observing the same woman, one of whom "sees" her as a prospective employee, and one of whom "sees" her as a prospective companion or date. What each man expects of the woman, as well as of himself, and how each man behaves toward the woman, will be a function of how he "sees" her. This example illustrates the following basic assumptions of the Parsonian model: (1) There are, at any given level, four major ways in which actors "see" objects (alternatively, four major kinds of interest that actors have in objects), as objects of utility, cathexis, identification, and generalized respect. (2) To "see" an object in a given way (including the self) is to hold certain expectations concerning its behavior, and to behave toward it in certain ways. There are, at any given level, four major categories of expectations (norms) one corresponding to each of the four ways of "seeing" objects, and four ways of communicating with, and about, objects, one corresponding to each way of "seeing." In a social system (or any action system) all four ways of "seeing" objects, categories of expectations, and types of symbolic media are present in an order of emphasis determined by the value system, and units of the system tend to differentiate from one another in terms of the way things are seen. The materials concerning exchanges of inputs and outputs are more detailed elaborations on this basic model.

Let us now turn to the focal concern of this monograph, the analysis of organizations. In what follows we shall examine organizations through the application of the approach elaborated and illustrated above. For Parsons, the characteristic which distinguishes organizations from other types of collectivities is the primacy of their orientation to the attainment of a specific goal.

> A collective goal here means a relatively optimal relation between the collectivity and some aspect of its intrasocietal situation (e.g., other collectivities) or its extrasocietal environment. It may concern not only relations to other collectivities, but also to personalities of individuals, cultural objects (e.g., as a result of change through research), and organic or physical objects. Especially for a collectivity continuing in time and holding multiple interests, a particular goal is not isolated; it is part of a system of goals. Any particular goal must, therefore, be fitted into a larger system of goals according to its rank order and timing with reference to other goals. A goal exists only if the desired state differs from the actual or expected state at the inception of action. Goals admit of degrees of attainment, all-or-none instances being special cases. (Parsons, 1966b, p. 72.)

In terms of the preceding discussion, this means that the paramount value emphasis of organizations is, like that of a goal oriented society, control of the environment through effective performance in the interest of goals. Certain of the features of organizations derive from this goal primacy, but others derive from the particular type of goal sought. For example, although the business firm is a goal-oriented collectivity, and as such places high value on effectiveness, it is also an adaptive organization, and as such emphasizes economic rationality.

The general principle involved here is that the selection of action alternatives in the several functional contexts is constrained by the value system of the organization. The value system of the organization is conceived as differentiated from the common societal value system in the direction of the function of the organization for society. Thus, the value system of the business firm is a derivation from the societal value pattern in the direction of adaptation. This means that the business firm, in its own value system, gives first priority to adaptation. (The adaptive emphasis will, of course, differ from society to society according to the place of adaptation in the given society's order of priorities.) This, in turn, means that the business firm will tend, in the selection of alternatives in the goal, integrative, and pattern-maintenance contexts, to seek those alternatives which enhance the firm's adaptive position. Similarly, the pattern-maintenance organization, e.g., the university, will tend to select only those goal, adaptive, and integrative alternatives which contribute to the maintenance of the pattern of its units, and the political party will tend to select only those adaptive, goal, and pattern-maintenance alternatives which contribute to its solidarity. Likewise, the goal-attainment will tend not to allow adaptive, integrative, and pattern-maintenance exigencies to interfere with collective effectiveness.

Basis of Classification

The attainment of a goal by an organization is, in the integrated case, the performance of a function on behalf of the society of which it is a part. Hence, the first distinction that can be made among organizations is in terms of the type of societal function, or goal, around which they are organized. Accordingly, we may distinguish organizations with adaptive, goal-attainment, integrative, and pattern-maintenance goals, depending on the function performed for the society as a system. From this point of view, the principal types of organizations are: (1) Organizations oriented to economic production. The business firm is the most obvious example of organizations with economic primacy. (2) Organizations oriented to the attainment of collective goals. Governmental organizations are the most prominent examples of this type. (3) Organizations oriented to integration. These are organizations which on the societal level contribute to the adjustment of conflicts and the direction of motivation to the fulfillment of institutionalized expectations. The courts, legal firms, political parties which mobilize support for government, interest groups, and hospitals are included here. (4) Organizations oriented to the expression and maintenance of cultural patterns and the maintenance of the pattern of the units of the system. Churches and schools are the most clear cut examples. Though not organizations in the sense used here, family functioning is placed here as well.

Further distinctions can be made within each category according to the function of the societal subsystem to which organizations contribute. That is, organizations with economic primacy can be subdivided on the basis of specialization in adaptation, goal-attainment, integration, and pattern-maintenance for the economy.

Any organization may be treated as a functionally differentiated subsystem of a society. From this point of view, its value system must be treated as a derivative of the values of the society as a whole. Since organizations are systems characterized by goal primacy, their value systems will be concerned primarily with the legitimation of their goals, and secondarily with the definition of the rules governing the pursuit of those goals. In the attainment of its goal, an organization performs a function for the social system of which it is a part. It produces an identifiable something which can be utilized by some other system. A goal state exists when the relation between the organization and its environment is supportive of the processes which go on within the organization.

For all organizations, then, there is something analogous to a market for the disposal of the output which constitutes the attainment of the organization's goal. Inputs and outputs at this boundary are maximized in what has been defined as the goal-attainment state of the system. As long as a goal state, or relation, is maintained with the environment, events in the environment are supportive of processes in the system. But the goal-attainment relationship is not the only link between an organization and its environment. There must also be (1) an independent input of facilities which enables the organization to maintain the goal state, (2) an integrative tie between the organization and its environment by virtue of which they may be treated as belonging together in the same solidary collectivity and hence entitled to mutual integrative support, and (3) a shared system of cultural values which define legitimate expectations for both the organization and environmental systems.

Another way of putting this is to say that whatever the nature of the organization's function, it may, like the economy, be treated at one level as a differentiated unit, and at another level as a system of four units each of which engages in an exchange of inputs and outputs with the environment. From the point of view of the organization of reference, these are external functions, and, as noted above, the external relations of systems are regulated by values. Internal functions, i.e., the relating of structural parts of the system to one another, are governed by norms which, since organizations are goal-oriented systems, primarily concern rights to make decisions which bind the performances of members of the organization. As Parsons has put it:

> In its internal reference, the primacy of goal attainment among the functions of a social system gives priority to those processes most directly involved with the success or failure of goal-oriented endeavors. This means essentially the decision-making process, which controls the utilization of the resources of the system as a whole in the interest of the goal, and the processes by which those responsible for such decisions can count on the mobilization of those resources in the interest of a goal. These mechanisms of mobilization constitute what we ordinarily think

> of as the development of power in a political sense. (Parsons, 1960c, p. 18).

We shall take up values, or the external functions first, and then turn to a detailed consideration of internal functions. Before we do, however, several points made in the preceding paragraphs should be clarified in order to avoid confusion. We have spoken repeatedly of the four functional problems as the foci of structural differentiation, i.e., the differentiation of units from one another. More recently, we have introduced the terms "external" and "internal" functions. The implication of these terms is that the four functional problems have both external and internal aspects. Or, to put it another way, a given functionally differentiated unit functions in both the external and internal contexts. The economy, for example, in contributing to the solution of the society's adaptive problem, relates to the environment; but it also functions internally as a mechanism for the allocation of disposable resources.

Thus, in what follows, we shall speak of four external functions of organizations, and in so doing will identify the four functionally differentiated organizational units. In a later section we shall consider the internal aspects of these same functional problems, and examine the functioning of the same units in relation to one another, first on an undifferentiated unit basis, and then as differentiated subsystems exchanging inputs and outputs with one another. The external functions of organizations parallel exactly those discussed above in connection with differentiated subsystems of the societal system. In the first place, values will be ascribed to the organization in its status as a unit in the more inclusive system. Since organizations are defined by the primacy of a particular type of goal, the focus of their value systems must be the legitimation of that goal in terms of the functional significance of its attainment for the more inclusive system. The goal of the mental hospital, for example:

> . . . is linked with the more general value system of the society through the patterns of valuation of the individual personality. American societal values put a primary emphasis on achievement, and it is chiefly because mental illness hinders effective achievement that in our society it is defined as an undesirable state. (Parsons, 1963, p. 112).
>
> Other important components of the American value system are also relevant here. Thus the "welfare" of the individual is positively valued and this includes his own states of satisfaction or "happiness." Hence, unnecessary suffering on the part of anybody is condemned. (Parsons, 1963, p. 112).

The goal of an organization can be defined more precisely in terms of a complex of social responsibilities. The public school, for example, is one of the agencies in which individuals are trained to be motivationally and technically adequate to the performance of adult roles. Its primary goal is socialization—the development in individuals of the commitments and capacities which are essential prerequisites of their future role performances. It is held responsible, in some measure, for developing in students (1) the capacities, competencies, and skills to perform tasks in a variety of roles; (2) the capacity to live up to generalized expectations of interpersonal behavior appropriate to a variety of roles; (3) commitment to perform in accordance with accepted normative patterns; and (4) commitment to the broad values of society. Like physical and mental health, education is valued in our society principally because the lack of it hinders effective achievement on the part of the individual, and progress on the part of society.

The value system of an organization, like that of any social system, establishes an order of priority among the four functional problems. It should be recognized, however, that there are limits to the extent to which any of the system problems can be neglected. Thus, while the military organization gives primacy to control of the situation through effective collective action, it cannot, in the long run, neglect the problem of integration with other societal units. By definition, the greatest weight is assigned to the paramount value emphasis, and again, the various combinations of emphasis permits the identification of 24 organization types. Whatever the type, a primary feature of a value pattern is its property of generalization. That is to say, the solution arrived at with respect to any given problem will be generalized to the other three so that together they constitute a meaningful, coherent system which provides the basic structural element of the organization, i.e., the patterning of its units.

External Problems of Organizations

The four external problems of organizations can be described as follows: First, the legitimation problem (pattern-maintenance) is concerned primarily with legitimating the goal of the organization in terms of the importance of its attainment for the values of the superordinate system. An organization could not function at all, in the integrated sense, if this legitimation were not given in terms of broad societal values. Even so, legitimation in terms of the culture of the society does not insure legitimation for a particular organization in a particular community. Hence, for any organization, it is essential that some attention be given to "public relations" through which the right of the organization to operate and the legitimacy of its claims to support are established and maintained. In terms of the paradigm elaborated above, this is a matter of demonstrating its commitment to societal values, and the relevance of its functioning to those values.

Second, the integrative problem concerns the integration of the organization into the larger community in which it operates. It involves those mechanisms by which the practices and procedures of the organization are made compatible with those of other organizations and social units, and hence, acceptable to the community at large. The problem is insuring adherence to patterns and procedures which are either generalized beyond the particular organization, or are considered justified by the particular circumstances of the particular type of organization. The three major complexes of integrative mechanisms identified by Parsons are the contract complex, the authority complex, and the universalistic rule complex.

> The central feature of the complex that I have called *contractual* is this: It defines the obligations of loyalty to the organization that are assumed by the providers of facilities to it, and by those employed by it. The essential problem of integration of the organization with the rest of the community is to maintain patterns of procedures consonant with those operative in the community at large. (Parsons, 1963, p. 120).

Similarly, the authority complex defines and limits the ways in which the actions of recipients of the organization's services, and of employees, can be bound by the decisions of responsible representatives of the organization. "The essential point is that, to carry out its functions, the organization must be given some order of control over the human situations in which this is done." (Parsons, 1963, p. 121) The contractual and authority complexes define in a relatively specific way what is to be expected of the organization, and thus the conditions under which it will be tolerated and supported in the community.

> But there is an even more general level of expectations that transcends the particularities even of this *type* of organization. With due regard to its special functions and needs, the organization must observe community standards of "good practice." (Parsons, 1963, p. 122).

Thus, even the military organization, whose functions legitimate a degree of authority that would be intolerable in other contexts, must adhere to standards of good practice. Even in this special case, an essential condition of smooth functioning of the organization in the larger community is conformity to general social standards of acceptable conduct. The training programs and disciplinary practices of military organizations cannot be unjustifiably severe. The interrogation practices of police departments must not violate basic freedoms. Hospital patients must not be subject to unnecessarily harsh discipline. Employees in all organizations must be treated fairly as defined by community standards, and so on.

Third, the goal-attainment problem concerns the disposal of the product of the organization and relations with recipients of its services. This includes determination of the scale of operations, the nature and quality of the product, the terms on which goods and services will be made available to recipients, and the criteria of eligibility to receive benefits. There are striking differences among organizations along this dimension. In some types of organizations recipients of services are taken into the organization as members. In others they have no direct contact of any kind with the producing organization. Whatever the particular arrangements, however, all organizations are confronted with the necessity of establishing and maintaining an optimal relation with the consumers of their products.

Fourth, the adaptive problem of organizations concerns the acquisition, or procurement, of the resources needed to carry out their functions. Whatever the mechanisms involved, and they vary greatly from type to type, the most general facility for organizations is money, i.e., the principal adaptive problem of organizations is financing. Through the acquisition of fluid funds the organization achieves a level of adaptive flexibility which permits it to acquire whatever physical or human resources are required to achieve or maintain a variety of goal states.

CLASSIFICATION OF ORGANIZATIONS

To say that these are external exigencies which all organizations must meet is not to say that a given exigency is of equal importance to all organizations. As noted above, the value system of an organization establishes an order of priority among the four problems. Organizations differ according to the societal function to which they contribute, and these differences are evident in the manner in which the four problems are resolved in the four type cases. Parsons has cataloged a number of differences among the four major types of organizations according to the manner in which these problems are resolved. (See Table 1) Others could be added, and of course, the catalog could be greatly refined by introducing sub-classifications within each of the four major organization types. In terms of the discussion of classification elaborated in Chapter 1, Parsons has clearly provided a classificatory scheme which orders a considerable amount of information about the entities classified, and hence conveys a substantial amount of information. That is, the identification of an organization as economically oriented permits one to make further statements about that organization's means of acquisition of resources, the terms on which it makes its product available to recipients, the conditions under which it will be supported in the larger community, and the means by which its existence is legitimated.

This is more than a classificatory scheme, however, for if procurement, disposal, integration and legitimation are viewed as variables (however difficult the measurement questions associated with them may be) then we can say that the relation among these variables is independent of the particular values of the variables, and is a constant function of the goal of the organization. Thus, the four variables constitute a predictive system. Given a value on the procurement variable, not all possible values on the disposal, integration, and legitimation variables are equally likely. From the knowledge that an organization must secure its resources through independent self-financing, one can predict with some degree of probability that it will also make it products available to recipients on a full payment of cost basis. However crude, this is a law which is, in principle, no different from Ohm's law.

From the observations recorded in TABLE 1, it is evident that the value emphases of the four major types of organizations are quite different. The adaptive organization, the business firm for example, emphasizes standards based on universalism and performance in all contexts. Goods and services are made available on a full payment of cost basis. Employees are remunerated on a marginal productivity basis. In the long run, independent self-financing through the proceeds of sales is a condition of continued operation. (Subsidized industries are an exception, but it is an exception which proves the rule. Subsidization is undertaken on grounds other than economic rationality, e.g., collective effectiveness. Thus, whether they pay their own way or not, air and rail transportation firms are essential to the national welfare.) The emphasis on particularism and quality in the integrative organization (e.g. hospital) is evident in the practice of taking the recipient of services into temporary partial membership in the organization. Quite unlike the customer who purchases goods and services in a commercial transaction, who pays the full burden of the cost, and who has no membership tie with the supplier, the patient in a hospital pays according to his ability, and is taken into temporary, partial membership in the organization. The patient is treated as an object of inclusion, rather than an object of utility.

The emphasis in the commercial case is on an exchange of utilities independent of any relation of solidarity between the parties to the transaction. In the integrative case, the emphasis is on the inclusion of the recipient of services in a solidary social system, an emphasis that is even

Table 1

CHARACTERISTICS OF MAJOR TYPES OF ORGANIZATIONS

Organization Type	**Pattern Maintenance**	**Integration**	**Goal Attainment**	**Adaptation**
EXAMPLE	School-University	Hospital	Military	Business Firm
GOAL	Maintenance or creative modification of motivational & cultural components-socialization.	Integration of units in social systems. (Social Control)	Implementation of authoritative decisions.	Production of utilities, goods and services.
VALUE MAXIMIZED PARAMOUNT VALUE EMPHASIS	Integrity	Solidarity	Effectiveness	Economic Rationality
INTEGRATION	Employees may quit for higher salaries, but self-interest not emphasized. Organization's right to terminate contract limited by tenure. Academic freedom limits authority, as does technical competence. Personnel have dual loyalties to organization and to profession. Public school authority extends into private affairs of personnel.	Loyalty of personnel limited by professional loyalties. Authority of organization limited by technical competence of personnel. Authority of hospital limited by patients' right to refuse treatment.	Special circumstances permit greater extremes of authority than in other organizations. Severe disciplinary practices tolerated. Organization strictly subject to the authority of recipients of service.	Loyalties limited by principle of economic self-interest. Authority of organization limited by right to quit. Authority of organization limited to on the job matters.

DEALING WITH RECIPIENTS	Services made available at no direct cost, or on sliding scale. Schools have authority over students-compulsory attendance. Teacher stands in loco parentis, no advertising, no sharp sales practices. Emphasis on welfare of the student.	Services made available on basis of ability to pay (sliding scale). Criterion of eligibility for receipt of services is need. Consumer does not shop around. No advertising. Patient (with some exception) can terminate the relationship at will. Hospital can terminate only on satisfaction of need. Recipient of services taken into organization as members. Patient "sold" only what he needs. Emphasis on welfare of patient.	No market for product. Services made available in response to authoritative decisions by legislative and executive branch of government.	Goods and services made available to recipients on a full payment of cost basis. Ability to pay only criterion of eligibility. Customer shops around for best buy. Seller utilizes sharp practices, misleading advertising. Sharp competition among firms for customers. Neither seller nor consumer has authority over the other.
RESOURCE PROCUREMENT	Public financing, partial self-financing through tuition, voluntary contributions. Remuneration on basis of "just price" in terms of organization's ability to pay. Tenure.	Partial self-financing, voluntary contributions, taxation, and income from services.	Financing by grant from public authority. Personnel recruited on basis of compulsory contract. Limited right to quit. Remuneration on basis of status-dignity. Tenure.	Independent self-financing out of proceeds of sales. Financial solvency a condition of continued operation. Personnel recruited on voluntary contract basis, remuneration on basis of marginal productivity. Value of the function of the organization is measured by capacity to pay its way. Contract terminable at will on both sides.

more evident in the case of interest groups and political parties. Their goal is clearly to produce solidarity through the inclusion of units in such a system. In the commercial case, however, the interest is on the acquisition of control of resources for the production of utilities.

Each of these cases differs from the pattern-maintenance organization, e.g., the public school. The principal goal of the public school, for example, is neither the production of utilities, the mobilization of resources for effective collective action, nor the integration of units in solidary social systems. Its goal is to contribute to the maintenance of the pattern of the units of the society through providing motivational commitment to institutionalized cultural patterns. Of all the differentiated units of a society, the pattern-maintenance unit most of all is expected to maintain its commitment to the values ascribed to it in its status as a unit of the societal system, whether or not this leads to integration with recipients of its services, compliance with its decisions, or access to objects of utility. The goal of the adaptive organization is to produce objects of utility; that of the goal-attainment organization is to produce compliance, or the performance of binding obligations, for effective collective action, and that of the integrative organization is to produce acceptance of membership for solidarity. In contrast, the goal of the pattern-maintenance organization is to secure respect for cultural patterns for the maintenance of the value pattern, and the pattern of the units of the system.

The adaptive organization spends money to secure control of the resources required for the production of utilities, and its continued operaation depends on the return of money, which in turn, depends on successful performance of the adaptive function. That is, financial solvency is a condition of continued operation. Similarly, the goal-attainment organization—the organization specializing in political functions—spends power (by making decisions) to acquire control of the resources needed for effective collective action, and its continued functioning depends on the return of power. This return is analogous to that of money to the adaptive organization in the form of consumer spending. It takes the form of constituent satisfaction with the success of the organization in producing effective collective action. Similarly, the integrative organization spends influence in securing control of the factors required to produce solidarity, i.e., to persuade units to accept membership in, and adhere to the norms of, a solidary collectivity. Its goal is to produce solidarity, but in order to continue to do so, the integrative organization must obtain a return of influence for its output.

Finally, the pattern-maintenance organization spends the generalized commitments at its disposal to secure control of the resources required to produce generalized respect. It also depends on a return for its continued operation. Whereas the continued successful operation of the firm depends on the maintenance of solvency through rational expenditure of funds, the continued successful operation of the pattern-maintenance organization depends on the consistency of the items selected with the pattern being maintained. The public school, for example, that employs an avowed communist, or a teacher who openly flouts standards of acceptable conduct suffers a loss in its capacity to secure resources on the basis of appeal to values alone.

Symbolic media are utilized by organizations to secure control of the factors utilized to produce an output. The factors utilized in the production of utilities are themselves objects of utility (land, labor, capital, and organization). They are objects of utility from which, through a combinatorial process, objects of greater utility will be produced. The utility of both the resource objects and the output object is measured in monetary terms, and in securing its resources and marketing its product, the primary concern of the economic organization is to maintain its solvency. The greater the contribution of a resource to the value of the product, the greater its utility and monetary value. Hence, personnel are remunerated on a marginal productivity basis, and there need be no great concern about the consistency between the qualities of the personnel employed and the values of society. Persons of any persuasion are employable, so long as they contribute to the utility of the product.

While the pattern-maintenance organization requires the same kinds of resources, and while the utilities and costs of objects are, in our society, always considerations, resource objects in the pattern-maintenance organization are significant primarily as objects of generalized respect. That is, while the utilities and costs of objects are always considerations, the significant question to be asked about a potential resource is not what it contributes to the utility of the product, and what it costs, but the extent to which it contributes to the maintenance of commitment to the institutionalized cultural patterns which structure the pattern of the units of the society, and what it costs in loss of generalized commitments. The maintenance of solvency demands that objects be symbolized in terms of monetary cost, and that those items be selected which, for a given purpose, cost the least. But the maintenance of pattern consistency demands that objects be symbolized in terms of generalized commitments, i.e., cost in capacity to command resources, because the services of the organization are good in themselves, i.e., objects of generalized respect. A teacher who flouts standards of decency or who advocates moral standards or political policies that conflict with those held to be right and proper is a liability in terms of the generalized commitment value just as an incompetent laborer is a liability in terms of monetary value for the business firm. The cost in terms of commitments of employing such a teacher is greater than the return from his or her contribution.

Thus, whether it be personnel, patterns of organization, physical facilities, or textbooks, the primary concern of the pattern-maintenance organization must be the compatibility between the object and the organization's own value pattern. The complaints of citizens about fads and frills, unsuitable books, undemocratic methods, etc., in the public schools may be seen to have their roots in this area.

SUMMARY OF EXTERNAL PROBLEM ANALYSIS

We can summarize the above discussion of the external problems of organizations by referring to the general paradigm summarized in Figure 6. We have utilized that paradigm in two ways. First, we treated the organization as a structural unit of a more inclusive system. The primary basis of structural differentiation is functional, i.e., in terms of the primary contribution of the unit to the functioning of the system. Such differentiation defines the goal orientation of the unit, the general rule being that the goal of a unit is a contribution to the functioning of the system of which it is a part. Thus, a unit specializing in the adaptive function makes its primary contribution, not to the attainment of system goals, to system integration, or to pattern-maintenance, but to the adaptive level which facilitates the attainment of a wide variety of goals. The attainment of a goal by a unit is, by definition, the production of an output to its situation, i.e., to other units of the system. At the same time, the goal-output is a source of a category of inputs (which need not be direct) to the unit from its situation. Units specialize not only in terms of outputs, but also in terms of inputs.

At this level of analysis, then, we identify four major types of organizations. Each is characterized by a particular paramount orientation, a particular goal, a set of norms governing the pursuit of that goal, and a type of symbolic media that the organization is expected to utilize in acquiring the resources necessary to attain its goal.

However, since the differentiated unit is, on the next level, a subsystem of the larger system, it will not only have specialized goal-outputs and inputs, but also distinctive adaptive patterns, patterns of integration and subvalue patterns. At this level we analyze the external problems of organizations, viewing the relation between the organization and its situation as a system which confers an order of priority on the four system problems. In terms of FIGURE 6, the organization viewed now as a subsystem, has all four orientation problems, i.e., needs or interests in relating to the situation. It has needs for instrumental capacities, for maintaining consummatory relations, for affiliating with, or becoming integrated into, the larger community, and for maintaining value commitments. Which of these needs is primary, of course, depends on the type of organization. Moreover, no two of these needs can be maximized simultaneously or to the same degree. There is, for example, an inherent conflict between the emphasis on the need for instrumental capacities, and the need for integrative adjustments to other units. Hence, the business firm gives primacy to the instrumental orientation and secondary, or tertiary, emphasis to integration. Conversely, the interest group or political party is primarily concerned with integrative adjustments and far less concerned about instrumental capacities. On the object meaning side of the paradigm, parallel distinctions can be made. The categorization of objects by the subsystem will involve all four patterns, but one will predominate.

Stated in terms of FIGURE 6, this means that the interest of the organization in situational objects is four-fold as formulated by the orientation categories. It must not only acquire instrumental capacities, maintain consummatory relations, and affiliate with, or be integrated into the community, but it must also maintain the commitments on which its functioning depends. Stated in terms of the object meaning variable, this means that the categorization of objects will involve, in some order of priority, objects of utility, goal objects, objects of inclusion, and objects of generalized respect. It also means that the categorization of the performances of the organization itself will include, in some order of priority, an emphasis on utility, effectiveness, solidarity, and integrity.

REVIEW OF LEVELS OF ANALYSIS

To review where we have been, we can say that at the highest level of analysis, the society was viewed as capable of characterization in terms of a value system which confers an order of priority on the four functional problems of the society as a social system. At this level the basic paradigm was applied to determine the kind of system we were dealing with. While it is possible to differentiate among societies in terms of the functional problem to which they give paramount emphasis, in all cases the value system involves all four emphases. At a second level of analysis, we examined the internal differentiation of the society itself. At this level, we utilized the same basic paradigm to identify the economy, the polity, the societal community, and the pattern-maintenance sectors as units of the society respectively incorporating, or emphasizing, the adaptive, goal-attainment, integrative, and pattern-maintenance component of the societal value system. One of these primary units, or subsystems, will embody the paramount value emphasis, and hence, will be given the most stress by the common value system. The economy and polity were characterized as oriented primarily to the environment of the system, while the societal community and pattern-maintenance units were oriented primarily to the internal problems of the system. To say that a unit of a system is oriented primarily to the environment of the system, however, does not mean that the unit minimizes its interaction with other member units of the system in favor of relations with environmental objects. What it does mean is that if the primary concern is adaptation to the environment, then the unit will (1) adopt a particular mode of orienting to, defining the meaning of, and structuring relations with other units of the system, and (2) adopt a particular corresponding mode of orienting to, defining the meaning of, and symbolizing objects external to the system.

The same point may be made with respect to the unit with an internal emphasis. It is not a question of whether the unit relates to member units, or to environmental objects, but a question of the way in which the unit relates to both of these. Thus, specificity-neutrality, universalism-performance, and universalism-specificity, respectively, define ways for a structural unit to orient to, define the meaning of, and structure relations with, other structural units of the system which maximize the adaption of the system to its environment. Relations among units of structure are regulated by institutionalized norms. Correspondingly, specificity-neutrality, universalism-performance, and neutrality-performance, respectively, define ways for a structural unit to orient to, define the meaning of, and structure relations among units of process. Relations among units of process, e.g., goods and services of economic value, are structured through the mechanism of symbolic media which are both measures of value and media of exchange. The exchange of symbols, i.e., communication, takes place among the member (structural) units of the system; the symbols themselves, however, refer to objects external to the system.

The second level of analysis, then, deals with functionally differentiated units and their characteristic modes of orientation, goal categorization, normative integration, and symbolization. At a third level of analysis, each of the four primary societal units—the economy, polity, etc.—was treated as a subsystem in its own right, each characterized by its own value system, and each consisting of four subunits differentiated around its own system problems. In the material presented above, this level was illustrated by drawing on Parsons' and Smelser's (1956) analysis of economic processes in which the economy was conceived as four differentiated units, each engaged in an exchange of inputs and outputs with similarly differentiated units of the polity, societal community, etc. There were the outputs from the economy to, and inputs to the economy from, its environment. From this point, we moved to a consideration of the processes of exchange internal to the economy. Here, each subunit of the economy was treated as a subsystem consisting of four units, each engaging in a process of exchange with similarly differentiated units of the other three economic subsystems. At this point in the illustration we could have, but did not, consider the orientation, goal outputs, institutional structure, and symbolic media involved in exchange processes.

In our present examination of organizations we are following the same procedure. We have already considered the external functions of organizations, a level of analysis which was not undertaken on the societal level. Had that analysis been undertaken, we should have found ourselves dealing with the same functionally differentiated units—the economy, polity, etc.—but in the context of their exchange of inputs and outputs with the environment of the society. Externally, the focus of the polity is foreign relations, i.e., the maintenance of desirable, and the prevention of noxious states in relation to the environment. The level of organizational analysis to which we now turn is comparable to the illustrative analysis presented above in which the economy, polity, etc., were differentiated from one another in terms of characteristic modes of orientation, object categorization, institutional regulation, and symbolization. We shall first consider the four differentiated units of organizations in the terms specified, i.e., their orientations, etc. We shall then consider each of these units as subsystems constituted by four subunits. At this level we shall take up the analysis of input-output exchanges among the differentiated subunits of the several subsystems.

Internal Problems of Organizations

Whatever the nature of the organization is in terms of the function performed for the more inclusive system, and whatever the differences are among organizations in terms of internal structures and processes at one level of abstraction certain assertions can be made concerning organizations in general. The most general proposition is that any organization tends toward differentiation of structure in accordance with the four functional problems.

The meaning of these problems is constant from system to system:

> the goal-attainment function realizes the primary orientation of the system: the adaptive function meets certain situational exigencies, either by adjusting in the face of inflexible reality demands or actively transforming the environmental features in question; the integrative function regulates the inter-relations between the already-differentiated adaptive, goal-attainment, and latency subsectors, mitigates the level of distinct differentiation that each attains, and in general promotes harmonious interaction; finally the latency function furnishes, maintains, and renews the motivational and cultural patterns integral to the interaction of the system as a whole. (Parsons and Smelser, 1956, p. 197).

BASIC ELEMENTS OF ORGANIZATIONS

By means of the four functional problems, and their more specific explication in terms of the pattern-variables, Parsons provides an answer to the questions, "What are the basic elements of organization?" "What are the relevant properties of these elements?" and, "How are these properties related to one another?" The pattern variable combinations provide the basis for classifying activities and their sources in so far as these have become stabilized, in terms of their functional relevance to the system.

It must be borne in mind, however, that the Parsonian functionally differentiated unit, or subsystem, is a hypothetical, theoretical entity. There are varying degrees of empirical differentiation of discrete structures depending on the complexity of the system. This is not a question of correspondence between the empirical and theoretical systems, but one of the discreteness of concrete empirical units. As Parsons has noted:

> . . . concrete structures do not follow lines of differentiation of system function exactly. . . . The situation is closely analogous to that in the biological sciences. Without the categories of metabolism, respiration, locomotion, coordination and like [which logically parallel the functional imperatives] it would be impossible to analyze the structure and functioning of complex organisms, but speaking of any one concrete organism-system as serving only one organic function is seldom legitimate. (Parsons, 1954, pp. 399-400).

Thus, for example, when the elementary school is viewed as a differentiated system, the concrete, common-sense role of principal turns out to serve at least three of the four system functions. In the less differentiated case of the teaching principalship, it serves all four. The principal not only secures and allocates resources, implements policy decisions, and engages in coordinative activities, but he also engages in technical activities which implement directly the basic commitments of the organization.

FUNCTIONAL DIFFERENTIATION OF ELEMENTS

There are two ways of approaching the internal aspect of functional differentiation, one emphasizing temporal phases, the other emphasizing structural units. Although somewhat different points can be made from the two approaches, the basis of differentiation in the same. The functional problems, as defined by the pattern-variable combinations, provide ways of categorizing activities that occur within the concrete organizational setting in terms of their relevance to the functioning of the system. At the very least, it should be possible to identify temporal phases during which one kind of activity is more prominent than the others. In more complex and fully differentiated cases, it should be possible to identify specific structural units which engage more in one kind of activity than in the others. For the several units of a system in a given functional phase, or for the unit—or units—specialized with respect to a given function, there should be a distinctive mode of orientation, mode of object categorization, goal, set of normative standards, and type of symbolic media.

One class of activities should prove capable of characterization as a combinatorial process oriented to the creation, expression, and maintenance of the cultural patterns which define the basic structure of the organization, i.e., to the maintenance of the pattern of the units of the organization. Pattern-maintenance activities, by definition, are those which involve no change in the state of the system. Their execution leaves the system in the same patterned state, changing neither the level of adaptation, goal-attainment, nor integration.. These are activities in which the concern of the unit, whether on a temporary, temporal phase basis, or on a relatively stable differentiated structural basis, is one of commitment to the expression, or implementation of the values ascribed to it in its status as a unit of the system. Thus, the orientation of the unit is diffuse-neutrality, or commitment, and the categorization of objects is in terms of universalism-quality, or as objects of generalized respect.

To categorize an object as one of generalized respect, particularly possible performances of the categorizing unit itself, and also performances of other units, is not to label it as such an object, but to raise the question, "Does it express the values and cultural patterns ascribed to the actor in its status as a unit of the system?" The focus is on the classificatory qualities of the object, independent of its relations to the actor. Whether or not the action increases solidarity between the unit and other units, or among other units, whether it increases collective effectiveness, or the utilities available to the system is irrelevant.

We noted above that the production of functionally relevant output is accomplished through a process of combining factors by a number of units during a phase of activity, or by a specialized structural unit (which may itself be a subsystem including a plurality of sub-units). Thus, for example, the economic firm secures the factors of production (land, labor, capital, and organization) from other units of society and combines them to produce objects of utility. However, the factors themselves are objects of utility, i.e., defined by universalism and performance. Hence, what is accomplished in the combinatorial process is adding utility to objects of utility, i.e., adding value. Universalism and performance thus describes both the terms in which the organization categorizes input factors and the terms in which other units categorize its outputs.

The same point can be made with respect to the units within organizations. The pattern-maintenance unit both evaluates the factors contributed by other units as objects of generalized respect, and produces generalized respect through a value-added combinatorial process.

Just as the output of the pattern-maintenance organization can be viewed as a contribution to the maintenance of the pattern of the units of society, so can the output of the pattern-maintenance unit of the organization be viewed as a contribution to the maintenance of the pattern of the units of the organization. The responsibility of the pattern-maintenance unit is to maintain the system in its patterned state, not to change it either in the direction of increased solidarity, effectiveness, or utility. If each unit of a system simply acted in accordance with the cultural patterns ascribed to it, then there would be no change. The system would remain in its patterned state.

If we conceive of the maintenance of system integrity as a goal toward which the activities of units are directed during a given phase, or toward which functionally differentiated units strive, then the medium which symbolizes the objects of respect which are combined to produce the output, and which units are expected to utilize in acquiring control of the resources required to attain the goal, is generalized commitment. That is, the symbolic medium that units are to utilize in the pursuit of pattern-maintenance goals, ie., in their attempts to control the action of other units to maintain the integrity of the system, involves the invocation of the honor of the unit. Communications involving generalized commitments appeal to the conscience of the receiver, and attempt to activate obligations the violation of which is associated with feelings of guilt. It involves the invocation of moral obligations conceived to be binding independent of any external sanction.

An additional consideration that may be introduced here is the normative standard governing the utilization of symbolic media. Just as the maintenance of solvency is an imperative norm governing the utilization of monetary funds for the unit of the economy, and thus a standard governing its decisions, so is pattern consistency an imperative norm governing the utilization or expenditure, of generalized commitments. Stated in decision-making terms, this means that the criterion for evaluating any given object, or for selecting from among alternative objects to be "purchased," is its degree of consistency with the value pattern or with the maintenance of the pattern. The unit expends generalized commitments to secure control of the factors required to maintain its pattern, but to continue to do so it must maintain the consistency of its pattern.

A second class of activities should prove capable of characterization as integrative activities, as combinatorial processes contributing to the harmonious interaction, or solidarity among functionally differentiated units. By definition, these are activities which involve a change in the state of the system. They are, according to FIGURE 6, activities characterized by an interest in affiliation, and an object categorization of identification, or inclusion. Here the interest is not in the maintenance of system integrity, but in the maintenance of a diffuse affective relationship among the units constituting the system. For an actor to categorize an object, say an action on the part of a member unit, as an object of identification is not automatically to label it as such, but to raise the question, "Does it express the attitudes ascribed to the originating unit in his relation to me as a common member of the organization?" The focus is on the quality of attitude expressed toward ego. For example, if the relationship is friendship, then the categorization of an act in these terms is to assess it in terms of the extent to which it expresses the attitudes ascribed to friends. If the relationship is common membership in a collectivity, then the emphasis is on the expression of attitudes ascribed to units in such a relationship.

In the integrative phase of activity, then, or for an integrative unit, the interest is in affiliation, and objects have meaning as objects of identification. A phase of activity, or the activities of a differentiated unit over time, include more than categorization of discrete objects, however, The outcome of integrative activity is added identification of member units with one another, i.e., system solidarity. Solidarity is thus a value principle in terms of which the contributions of units can be assessed. If solidarity is a value principle in terms of which objects can be compared, then there must be a symbolic medium which is a measure of that value, and a medium of exchange. From earlier discussion we know that influence symbolizes solidarity. That is, influence is both a measure of the solidarity value of a given object of identification, and the medium of exchange that units are expected to use in their attempts to bring about changes in the actions of other units in integrative contexts.

As a medium of exchange influence can be utilized to "purchase" objects of identification, i.e.., to pursuade other units to "act like one of us." Attempts to influence are attempts to establish a common bond of solidarity between the influencer and the influenced.

Finally, just as pattern-consistency is the imperative norm governing the use of media, or the making of decisions, in pattern-maintenance activities, so consensus is the norm governing integrative activity. The criterion governing selections from among alternative courses of action, or for evaluating any particular proposal, is the consensus concerning its appropriateness. Just as the selection of alternatives that are inconsistent with the pattern is antithetical to the maintenance of sysem integrity, so is the selection of alternatives concerning which there is conflict antithetical to the maintenance of solidarity.

A third class of activities should prove capable of characterization as goal-attainment activities. Goal attainment activities are those in which the basis of interest is neither the implementation of commitments, nor inter-unit affiliation, but consummation, or goal gratification for the system as a whole. The orientation is thus specific and affective, and objects are categorized as particularistic performances. An object categorized in these terms is assessed as a system goal. In the case of a simple system involving ego and alter, the question raised by ego, the orienting and categorizing actor, is "What is the effect of alter's action, or what does it do (performance) in relation to me and my interests (particularism)?" Where a plurality of actors is involved in a combinatorial process in which each seeks states desired by himself, however, the outcome is a binding decision which produces performances in the service of collective effectiveness. That is, the product, or output, is particularistic performances, the fulfillment of binding obligations to the collectivity, which are the basis of collective effectiveness. Effectiveness, then, is a third value principle in terms of which objects may be assessed. Some objects, and by extension, some units, are more or less effective than others, and the symbolic medium in terms of which the effectiveness value is measured is power. The acquisition of the factors required to produce effectiveness, i.e., particularistic performances, or compliance with, or fulfillment of, binding obligations to the collectivity, requires expenditures of power. Power is expended through making decisions that bind the actions of members of the collectivity, and the imperative norm governing the expenditure of power is sovereignty. That is, power is a medium which can be expended through making decisions which "purchase" compliance from other units, and the criterion guiding the selection from among alternative "compliances," or particularistic performances, is maintenance of the ability to command compliance without borrowing power. Here the probable success of the decision in securing compliance is more important than consensus concerning its appropriateness, or the consistency of the alternative with the value pattern. The question is whether the decision can be "made to stick."

Finally, a fourth class of activity should prove capable of description as adaptive activity. These are activities characterized by an instrumental orientation, and an object categorization based on universalism and performance. As we noted above, to categorize an object as particularistic performance is to assess it in terms of its significance as a goal object. To so categorize an object is not to give it the status of a collective goal, but to evaluate it as more or less valuable as a contribution to effective collective action. Categorization of objects as universalistic performances, on the other hand, is an emphasis on the value of the object as an object of utility—a means. To categorize an object in these terms is to ask, "What does it do, or what can be done with it, not in relation to the interests of the actor, but independent of that relation?" With respect to any performance on the part of a unit, and by extension, to the unit itself, the question is not its relative value as a goal object, but whether it facilitates goal attainment by the most efficient means possible, whatever the goal may be. There is no evaluation of the act as a goal, only an assessment of the extent to which the action is rationally adapted to the intrinsic features of the situation. Thus, units of the system, and their acts, are evaluated, not in terms of what goals they seek, but in terms of the efficiency with which they facilitate goal attainment, independent of any particular goal.

The focus of interest during, and the outcome of, a phase of activity, or the activities of a specialized unit, with this emphasis, is not the mobilization of resources for effective collective action, but the adaptation of resources to a variety of system and unit wants and demands. The problem is procuring and creating from available resources the means which facilitate the attainment of a variety of system and unit goals, or objects of utility. The value of objects of utility, in turn, is measured by monetary value. Money is a symbolic medium which serves both as a measure in terms of which utilities may be compared, and as a medium which may be utilized to acquire control of such objects. Human performances may be such objects, and hence, like power, influence, and generalized commitments, money is a means of bringing about changes in the action of units in the process of interaction. The imperative norm governing expenditure of monetary funds, or governing decisions concerning the selection of alternative means, is solvency. That is, the norm governing the action of units in an adaptive phase, or the action of a specialized adaptive unit, is financial solvency.

In the preceding discussion of phase and structural differentiation within organizations we have dealt with orientation, object meanings, goals media, and normative imperatives governing the use of media, but we have omitted entirely any discussion of the normative rules regulating interaction among units that are parallel to the institutions of contract, authority, etc. These normative rules concern, not the standards governing selections from among alternatives, but the question of who has the right to make such decisions and what kind of decisions can be made. Another way to put this is to say that the normative rules involve three basic components. For example, the institutions of property and contract specify the rights, responsibilities and obligations of parties to the process of economic exchange and the kinds of things that can be treated as property and the kinds of contracts that can be entered into. They do not, however, provide any guidance to the participant concerning which contracts should be entered into, which property should be purchased, etc. Underlying the institutions is the decision criterion, or third normative standard which guides such decisions, termed economic rationality. There is, then, not only the question of what decision criterion is to be utilized, *and* the further question of who has the right to make the decision, but also what decisions can be made.

FUNCTIONAL DIFFERENTIATION WITHIN ORGANIZATIONS

The same basic point can be made with respect to the internal differentiation of organizations. First, there is the normative standard in terms of which decisions concerning each functional problem are to be made, regardless of who makes them. Second, however, there is the question of *who*, in the sense of position in the organizational structure, is to make the decisions and, third, there is the question of what kinds of decisions are legitimate. Conflicts within organizations can focus on either, or both, of these two levels. Personnel may agree completely that an executive has the right to make a given type of decision, but disagree just as completely with the criterion employed, and vice-versa.

In less formal, analytical terms, the four internal classes of organizational activity, or four foci of temporal and structural differentiation, which correspond respectively to pattern-maintenance, integration, goal-attainment, and adaptation are (1) technical activities, (2) coordinative activities, (3) policy implementation activities, and (4) facility maintenance and allocation activities. To the extent that these activities become the responsibility of specific statuses in the organization, we can speak of functionally differentiated structural units. Technical or pattern-maintenance functions are those performances which are expressive of, or which implement directly and maintain, the basic cultural patterns ascribed to the organization. They are the latent prerequisites which underlie the realization of organizational goals; latent in the sense that they proceed continuously and independent of the organization's larger adjustments. That is to say, technical functions are relatively insulated from, and insensitive to, short-run changes in the relations between the organization and its environment. The goal of the educational organization, for example, is to develop in students the commitments and capacities which are prerequisites to future role performances. If societal requirements relative to these commitments and capacities were completely stable and if the conditions of instruction were completely determined technically, then the educational processes would be routinized. Education would be a function of two sets of givens, the technical procedures on the one hand, and the educational demands on the other.

But the fact is that both demands and technical procedures change, and adjustments must be made within the limits imposed by value commitments. Relative to the given values, then, a set of processes in the organization differentiates to accommodate shifts in consumer demands. An educational organization, like other organizations, has several sub-goals within the broadly defined goal. Since the roles for which schools are expected to provide commitments and capacities range all the way from subsequent student roles, through familial, occupational, consumer, and recreational roles to political roles, the goals of the school are highly diversified and the accommodation to changes in demands is largely a matter of manipulating these goals through the making of policy decisions concerning the relative emphasis to be given to each. In the post-sputnik era, for example, considerably greater relative emphasis was given generally to college preparatory programs, and specifically to science, mathematics, and foreign languages.

The implementation of a value pattern cannot proceed in a vacuum. It requires premises in which technical functions are carried out, equipment, supplies, personnel and of course, materials, or clients, to be processed. Hence, a further set of processes in the organization differentiates to provide the facilities required for the performance of technical functions, and the organization through which resources are allocated. But facility maintenance is not merely the accumulation of facilities. There must be selective accumulation and allocation in accordance with the policy needs of the organization. Allocation is the distribution of earmarked facilities to operations which implement external commitments.

Finally, the implementation of policy decisions, and their consequences for the distribution of resources, and for technical functions, have repercussions which bear unevenly on different units and suborganizations within the organization. This uneveness is the source of problems in maintaining the integration of the organization, i.e., the loyalty of personnel to the organization, and their support for policy decisions. Any given policy commitment is only one of a number of possible alternatives, and the selection of one alternative, while satisfying to some units, may be dissatisfying to others. There is need, then, for a differentiated set of processes, the function of which is to reduce conflicts and to maintain a mutually supportive relationship among differentiated subsystems. Hence, the coordinative subsystem functions to minimize conflicts arising from goal commitments by mediating between the technical, allocative and policy subsystems.

Each of these subsystems is characterized by a different set of values on the orientation, object meaning, norm and media variables. Moreover, as a subsystem, each will have its own value system differentiated from the organizational value system in the direction of its function in the organization. Just as the pattern-maintenance subsystem of a society may be conceived as committed to expression and maintenance of the societal value system, and through that to the maintenance of the pattern of the units of the society, so may the pattern-maintenance, or technical, subsystem of the organization be conceived as committed to the expression of the organizational value system, and through that to the maintenance of the pattern of the organization's units. In addition, of course, it is committed to the maintenance of the pattern of its own units. Similarly, just as the goal-attainment subsystem of a society may be conceived as committed to the mobilization of societal resources in the interest of societal goals, so may the goal-attainment, or policy, subsystem of the organization be conceived as committed to the mobilization of organizational resources in the interest of organizational goals. The facility maintenance subsystem is oriented to the instrumental needs of the system; in the attainment of its goals it processes resources and allocates facilities. The norms governing its activities are a sub-category of authority, i.e., they specify decision-making rights in the context of facility and personnel allocation and the principal media utilized is money. The policy is oriented to the consummatory needs of the system; it produces and implements binding policy decisions, utilizes power as a medium, and is regulated by norms governing policy decisions. The coordinative subsystem is oriented to the solidarity needs of the system; it produces solidarity, is regulated by coordinative decision rights and utilizes influence to attain its ends. The technical subsystem is oriented to the commitment needs of the system; it restores and maintains the respect for the system itself; the norms governing its activities are grounded in relevant cultural standards themselves, and the media utilized is generalized commitment.

INTERNAL IMPLICATIONS OF ORGANIZATIONAL VALUES

We have seen that the characteristic primacy of orientation to the attainment of a specific goal gives priority to the processes by which those responsible for goal-attainment mobilize organizational resources in the service of system goals. This, as noted above, means that the focus of internal functions is decision making, and that the salient norms concern authority, i.e., the rights and duties of decision-makers. Hence, all organizations tend, in their internal structure and functioning, toward the pattern exemplified by the goal-oriented society. That is to say, hierarchies of authority and evaluative standards emphasizing contribution to the system goal are prominent features. Nevertheless, within the constraints imposed by the primacy of goal-orientation, the value system of the organization, which is conceived as differentiated from the societal value system in the direction of the function served by the organization, has significant internal implications.

In the first place, the value system defines the nature of the organization's goal, i.e., whether it is the production of utilities, binding decisions, solidarity, or respect for cultural patterns. This, in turn, will establish internally the norm type which directly embodies the paramount values, and commitment to such a set of values implies a tendency to maximize their implementation in action and thus in concrete structure. Thus, just as we can see in American society and social structure a tendency to maximize adaptive values, so can we see in organizations and their structures tendencies to maximize the values appropriate to their functionally related values. In American society, for example, adaptive values give primacy to the universalistic achievement norm, and the generalization of that norm leads to goal-pluralism, or few restrictions on the goals that units are permitted to seek, a primary emphasis on productive activity in the economy, and through that to whatever contributes to economic productivity, e.g., geographical mobility, separation of the nuclear family from the extended kinship unit, education, science, and health.

The same kind of pattern generalization can be seen at work within organizations. From the business firm's emphasis on adaptation to a highly changeable environment follows its centralization of policy and allocative decisions in the hands of top management, its emphasis on technological rationality, the "revolutionary" speed with which organizational patterns are altered, and its emphasis on economic efficiencey. (It seems fair to say that a business firm structured like a university simply could not survive in a competitive situation). Similarly, from the university's emphasis on the maintenance of the pattern of its units follows the "collegial company of equals" (modified by the academic caste system) pattern of decision making, the absence of a "line" organization, "academic freedom," the absence of technical supervision, and the absence of either technological or structural revolutions. Neither the university nor the public school readily abandons a goal, or a sub-goal, simply because it is no longer in demand for practical pursuits, nor do they readily assume new ones upon evidence of demand. Partly this is due to the fact that the product of the organization is the cultural tradition, values and knowledge, and these, particularly the former, are far more stable than demands for goods and services, or for political decisions. Changes that have occurred in the cultural tradition have been additions to the knowledge component not values and the coresponding changes in education seem to have been confined largely to physical facilities, the amount of knowledge contained in the curriculum, and the length of time students spend in school.

INTERNAL PROCESSES OF EXCHANGE

It was suggested above that each of these primary subsystems might be further divided into four subsystems for purposes of analyzing internal exchange process. (Parsons, 1960d, 1963). Parsons' few discussions of these processes are abbreviated and more suggestive than definitive. The little information provided, when combined with the general analytical framework, however, may provide the basis for a tentative analysis. The general framework dictates that each of the functional subsystems identified above be subdivided into a pattern-maintenance, integrative, goal-attainment, and adaptive subunit.

The source and destination of exchanges among subunits remain the same as those identified in the discussion of economy, but the content changes. As a matter of convenience the following notation will be used: T, C, P, and F refer, respectively, to the technical, coordinative, policy and facility subsystems. Tl, Ti, Tg, and Ta, refer, respectively, to the pattern-maintenance, integrative, goal-attainment, and adaptive subunits of the technical subsystem. Similarly Cl, Ci, Cg, and Ca refer to those same subunits of the coordinative subsystem. The general paradigm of exchanges outlined above is as follows. (See FIGURE 10)

Tg-Fg
Ta-Ca
Ti-Pi
Fa-Pa
Fi-Ci
Pg-Cg

First, let us take up the exchange between the technical and facility subsystems. This is an exchange over the goal-attainment boundaries of the two subsystems (Fg-Tg). In the attainment of its goal the technical subsystem produces an output of technical performances which maintains and implements organizational values and cultural patterns. The maintenance and implementation of a value pattern, however, require concrete premises, supplies, materials to be processed, etc. These are provided as the goal-output of F. But, in the attainment of its goal F must solve its own adaptive problem. The primary situation to which F must adapt is the current policy commitments as defined by P. The attainment of F's goal cannot be a random accumulation of facilities, but must be a selective accumulation and allocation in accordance with policy commitments. Adaptation for F, then, consists of maintaining a generalized capacity to secure a variety of kinds of facilities to permit their reallocation in accordance with policy changes.

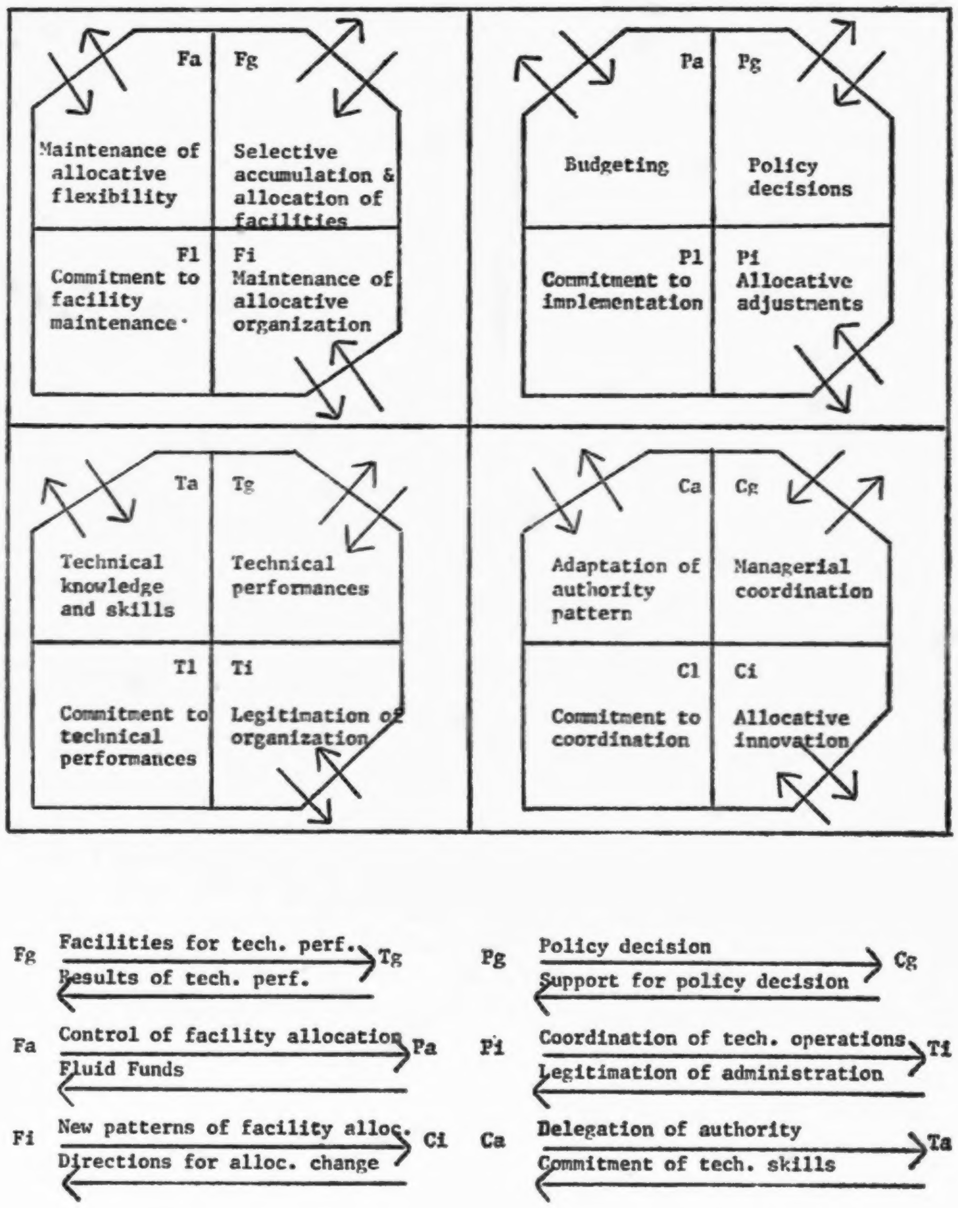
The facility maintenance subsystem's need for generalized adaptive capacity is met by an input of fluid funds from Pa. In return Fa provides Pa with control of facility acquisition and allocation. Thus T and P stand in a mutually adaptive relation. Through the acquisition of physical and human facilities with funds provided and earmarked by Pa, F exercises control over T. In turn, the dependency on Pa for fluid funds with which to perform additional facility processing constitutes a control over F.

Control of facility allocation is a factor in implementing policy commitments, the goal of P. The destination of decisions concerning the implementation of policies from Pg is Cg. This is an exchange between those responsible for implementing policy decision and those responsible for coordination. In exchange for directives to implement policy commitments, the coordination subsystem provides support for current commitments, i.e., conditional loyalties to the organization which integrate the technical and policy subsystems.

The primary facility for securing the acceptance of the consequences of policy decisions is authority. But the coordination subsystem faces situational restrictions to which it must adapt, principally the level of professionalization of operative personnel. That is to say the pattern of organizational authority must be adapted in accordance with the level of

Figure 10

INTERNAL STRUCTURE AND PROCESS OF ORGANIZATION


Fa
Fg
Maintenance of allocative flexibility
Selective accumulation & allocation of facilities
Fl
Commitment to facility maintenance
Fi
Maintenance of allocative organization
Pa
Pg
Budgeting
Policy decisions
Pl
Commitment to implementation
Pi
Allocative adjustments
Ta
Tg
Technical knowledge and skills
Technical performances
Tl
Commitment to technical performances
Ti
Legitimation of organization
Ca
Cg
Adaptation of authority pattern
Managerial coordination
Cl
Commitment to coordination
Ci
Allocative innovation
Fg
Facilities for tech. perf.
Results of tech. perf.
Tg
Fa
Control of facility allocation
Fluid Funds
Pa
Fi
New patterns of facility alloc.
Directions for alloc. change
Ci
Pg
Policy decision
Support for policy decision
Cg
Pi
Coordination of tech. operations
Legitimation of administration
Ti
Ca
Delegation of authority
Commitment of tech. skills
Ta

technical competence and responsibility of personnel. It must give recognition to their professional integrity and right to autonomy. Hence, there is an exchange between Ta and Ca which involves the delegation of authority by Ca and commitment to implementation by Ta.

A further requirement for the effective functioning of the policy implementation subsystem is the legitimation of its powers and authority. This requirement is satisfied in the Ti-Pi interchange. On the Pi side, an output of opportunity for successful performance is provided by making adjustments in the allocation of responsibilities. By re-defining responsibilities in accordance with policy commitments, Pi may ensure opportunities for successful achievement. On the Ti side, the corresponding output is legitimation of the administrative function. The primary focus of this legitimation lies in the justification of the cost of organization in terms of the opportunities it provides for the application of technical skills.

The final exchange, that between Ci and Fi, concerns the mutual integration of these two subsystems. In the F subsystem conflict arises from disproportion in the supply of facilities. Some balance is required among the various types of facilities so that what is needed is available when it is needed. New policy commitments, however, may make an acceptable combination of facilities unacceptable, and the re-integration of F requires an input of directives to change the balance of facilities from Ci. On the other hand, the integration of C requires an acceptable combination of facilities, authority, and responsibility. An acceptable combination of facilities is imporant, first of all, in the implementation of the value pattern. But facilities have symbolic meaning in terms of satisfaction, i.e., facilities have a reward aspect which affects the relative positions of units and enters into the mobilization of support. The contribution of Fi to this is new combinations of facilities, or changes in the patterns of allocation and organization required to provide the facility base for technical operations. The integrative relevance of this output lies in the significance of facilities as sources of personnel satisfaction and support for the organization.

The principal point of interest concerning the preceding outline of organizational processes is the possibility and consequences of imbalance, or disequilibrium in the several input-output exchanges. The notion of equilibrium maintenance implies that changes occurring on one side of the exchange will set in motion adjustment processes on the other side. If, for example, there are over a period of time, increases in the level of professionalization of operative personnel, and if there are no compensatory adjustments in the authority pattern, then one would expect operative personnel to take action to bring about an appropriate balance.

Similarly, smooth functioning of the organization requires some degree of balance in the exchange of policy decisions and support. The output of policy decisions may exceed the input of support, or vice-versa. Policy commitments exceeding the support level are sources of malintegration and dissatisfaction and may lead to withdrawal of support. On the other hand, a deficit on the policy decision side may have the same consequence. Failure of policy makers to make commitments for which support exists may also be associated with dissatisfaction.

A second point of interest concerns the differences in internal structure and functioning that are associated with a type of organization. Technical operations in universities, for example, are far less subject to administrative control than they are in business firms, governmental agencies, and military organizations. That is to say, the magnitude of the exchange of authority and technical skills is far greater in the university than it is in the other three. The input of facilities to T involves, to some extent, a message component which tells what technical procedure will be most effective in the implementation of policy commitments. The degree of control exercised by F over T varies a good deal from one type of organization to another. In extreme cases policy commitments are made, then spelled out in terms of facilities and simply presented to operative personnel to be utilized. In other cases, however, operative personnel are the only ones competent to determine the facilities required for the implementation of commitments. It may be possible for administrative personnel in a university to commit the university to the training of researchers, but it is highly unlikely that they will posses the competence necessary to decide what facilities are required to do the job.

This seems as far as it is fruitful to carry this analysis at this time. We have taken an analysis of structural and process system that has been relatively well worked out at higher levels and made a tentative application to organizations. Although what has been provided is highly tentative, and at best only a beginning, it may be enough to illustrate some of the ramifications and implications of the Parsonian approach to the study of organization.

The approach is the same whether it is applied to societies or to organizations. Parsons asks, "What are the constituent elements of organizations, and how are they organized to make a given organization what it is and not something else?" Again, the answer is clear. The constituent elements of organizations are everywhere the same, but they are organized differently according to values and norms.

CHAPTER 4

Organization in Education

One needs no elaborate analytical framework to call attention to the inter-dependence which exists among the economic, political, social, and educational elements of organization in a society. If, however, one's interest is in restating that basic insight in a way that is scientifically useful, then some kind of analytical framework is not only useful, but essential. To illustrate this point, there is a wide conceptual gap between recognizing the existence of a relationship between the condition of the air in a room, the action of a thermostat, and the production of heat by a furnace, on the one hand, and the stage of reformulating that insight in terms of such concepts as temperature, state of the switch, and state of the burner, on the other. This is a difference that makes a difference. The difference is that in the latter case we have moved to the stage of formulating our statements in terms of concepts which deal with specific, measurable properties of the elements of the phenomenon. It is difficult, if not impossible, to formulate an answerable question or to state a testable hypothesis in terms of concepts which deal with the diffuse, and for the most part unmeasurable, totality of elements. Given a set of concepts which treats specific, measurable properties of elements, however, one can say, "There is some kind of system holding between air temperature, the state of the thermostatic switch, and the state of the furnace burner." Moreover, if the problems of measurement have been solved, one can get on with the job of determining the specific nature of the heretofore intuitively recognized system.

A major contribution of Parsons has been the development of a set of interrelated concepts dealing with specific properties of the structural and processual elements of social phenomena in terms of which existing knowledge can be restated, questions can be asked, and hypotheses can be formulated. (Note that I did not say, "specific *measurable* properties;" the problems of measurement are by no means solved.)

Anything approaching an exhaustive application of these concepts to educational organization is far beyond both the scope of this monograph and the competence of its author. Such an analysis would involve consideration of structures and processes at the technical, managerial, institutional, and societal levels, as well as the interrelations among these levels, and between them and other elements of society. All that will be attempted here is an analysis of some aspects of the educational organization particularly the university and the public school.

The Function of the Educational Organization

As noted above, the educational organization is differentiated around the pattern-maintenance function of society. Its contribution to the functioning of society is the maintenance of the integrity of the institutionalized patterns of normative culture defining the pattern of the units of the society. A system without pattern, or structure, is a contradiction in terms. The absence of structure is randomness, the absence of system. Hence, the maintenance of structure is a fundamental imperative of social order. The structure of social systems consists of patterns of institutionalized normative culture. Institutionalization refers to the motivational commitment of members to act in accordance with normative patterns, and this, in turn, is conceived as involving the internalization, or incorporation, of patterns of symbolic culture in the structure of the personality.

The pattern-maintenance function involves two distinct problems, one related to each of two major sources of instability of motivational commitment to cultural patterns. The first concerns the cultural system itself; the second concerns the state of motivational commitment to that system. Patterns of symbolic culture, or the cultural system, can be divided into four major components, or subsystems: (1) The cognitive symbol system which maps the empirical world in terms of specific properties of objects and their effects independent of human interests, i.e., in terms of what empirically *is* the case. These are symbols in terms of which conceptions of what objectively is the case in the empirical world are formulated. (2) Expressive symbols, which map the empirical world in terms of the specific properties of objects and their effects on human interests, i.e., in terms of their gratification-deprivation, or reward-punishment, effects. These are symbols in terms of which conceptions of what is desired are formulated. (3) Evaluative symbols, in terms of which objects are evaluated as better or worse than one another. These are symbols in terms of which conceptions of the desirable are formulated. (4) Existential interpretations, in terms of which ideas concerning what is conceived to be the the case in the non-empirical sense are formulated. These are symbols in terms of which religio-philosophical beliefs are formulated.

At the level of the cultural system itself, the primary problem is the maintenance of pattern consistency. Changes occurring in one part of the system, e.g., the cognitive symbol, or empirical belief system, may give rise to pressures to change in other parts of the system, e.g., the value or evaluative symbol system. The tendency to stabilize these values against pressures to change through cultural channels is the pattern-maintenance function. The second source of change, that concerning the state of institutionalization, involves the motivational commitment of actors to perform in accordance with the appropriate patterns of normative culture. A central aspect of this problem is dealing with tensions and strains arising in the social situation which may threaten motivational commitment. Certain structural units of a society are conceived as providing for the management of such tensions. These include the family, and recreational and cultural activities and agencies.

Pattern-maintenance, however, is not solely a matter of maintaining the consistency of the cultural pattern and established motivational commitments to those patterns. It also involves the processes by which cultural patterns are modified, e.g., through research, and processes by which motivational commitments are acquired in the first place, i.e., the processes of socialization through which the relevant elements of the symbolic culture come to be incorporated in the personalities of members. In these terms, the function of the pattern-maintenance organization is the maintenance of the pattern of the units of the society either through primarily cultural, tension management, or socialization activities. Its function is a contribution to the solution of the problem of continuity and stability over time in the relations among the units of the system. The primary responsibility of the educational organization in any society is to maintain the system in its patterned state, not to change the state of the system, either in the direction of harmonious relations among units, collective effectiveness, or adaptation.

The performance of a function within a social system by a differentiated unit is always relative to the paramount value pattern of the system. Or, to put it another way, the functional significance of the educational organization, or another differentiated unit, is constant from society to society. But, since education is socialization in the cultural tradition of the society, and since the value system of the educational organization is a conception of the good school *within* what is evaluated as the good society, both the content of education and the relation between the educational unit and other societal units will be relative to the societal value pattern.

Characteristics of the Educational Organization

Certain general characteristics of the educational organization follow directly from its functional place in society. First, relative to other functionally differentiated units, the educational organization is stable and unchanging. Pattern-maintenance activity is, by definition, activity which leaves the system, i.e., the society, in the same patterned state, and unless the value pattern of the society places an emphasis on change and improvement, there is no basis for a conception of the educational organization as a progressively improving entity. But, even if the societal value pattern does involve a conception of the good society as committed to indefinite progress (as it does in our case), so that the educational organization is committed to the maintenance of that conception, and is itself conceived as committed to the improvement of its own functional performance (as it is in our case), the flexibility with which improvements may be made is reduced by the very values the organization is obligated to maintain. There is always the possibility that an improved procedure will be seen as a violation of the societal value pattern, e.g., ability grouping is sometimes seen as inconsistent with the commitment to equality of opportunity.

Moreover, even though the good educational organization in American society is conceived as committed to improvement, improvement in education does not consist of maximizing the educational output at minimum cost, but of maximizing pattern consistency. The imperative norm guiding the pattern-maintenance unit is not solvency, sovereignty, or consensus, but pattern-consistency.

Economic rationality as a value for the business firm leads in two directions to rapid change. First, rationality involves adaptation of means to ends independent of evaluation of the ends. That is, the rational firm produces what there is a demand for without having to be unduly concerned with the problem of maintaining the integrity of its value pattern and the pattern of its units. Within the broad limits imposed by the societal value pattern, the emphasis is on the maintenance and enhancement of the adaptive flexibility of the firm. Within the limits of societal values the economic firm is expected to change in whatever direction enhances its capacity to achieve any goal that comes to be of interest. It is not only free, but expected, to change in accordance with environmental changes. The pattern-maintenance unit, however, is conceived not as adapting to its environment, but as maintaining the integrity of its own value pattern. Hence, it is expected to maintain its state in spite of environmental changes.

PRIMACY OF VALUE INTEGRITY

In an organization with a pattern-maintenance emphasis the primary concern is with the maintenance of the integrity of its own value system, and hence, the maintenance of the pattern of its units, or structure. Where the obligation of the business firm is to rationally adapt to its environment, even if it means radically altering its structure, the obligation of the educational organization is to maintain the integrity of its commitments even at the expense of adaptation, goal-attainment and integration. Hence, organizational goals, adaptive procedures, and the procedures by which the organization is integrated with other units must be interpreted in terms of their meaning for the integrity of the value system. From this there follows a tendency to dichotomize situations into categories such as, "good," "bad," "right," "wrong," etc. The organization with pattern-maintenance primacy is likely to be uncompromisingly idealistic, and to define situations in black and white terms as either appropriate for the organization, or totally inappropriate. Any compromise of this position made in the interest of adaptation, goal-attainment, or integration, tends to be viewed as expediency.

The attainment of a goal by an organization, which is at the same time the performance of a function for society, is conceived as a combinatorial process. The organization acquires resources from, and produces outputs to, its environment. In the case of the business firm these resources are conceived primarily as objects of utility, and their value is symbolized in monetary terms. That is, the significance of the object is determined by its value in the relevant combinatorial process, and the value of an object of utility is determined by the amount it adds to the utility of the output. Thus, given an object (human, cultural, or material) which contributes materially to the utility of the product, and which can be secured on terms which enhance the adaptive capacity of the firm, the firm will adopt it whether or not it contributes to the maintenance of its structure.

The maintenance of the integrity of the value pattern, and the pattern of the units, of the society is also conceived as a combinatorial process. The educational organization also receives inputs from, and produces outputs to, the environment. But the resources, while in one sense the same as those utilized by the business firm, are conceived not as objects of utility, but as objects of generalized respect. Their significance is determined by the extent to which their utilization expresses the values ascribed to the organization, or to the maintenance of its internal patterns. No matter how much the object contributes to the capacity of the organization to pursue any goals that may be considered worthwhile, if it is inconsistent with the maintenance of the pattern of its units, it is unacceptable. Thus, the most efficient instructional device in the world will be rejected if it threatens the established, institutionalized pattern. At the very least, the object will be utilized in ways that are compatible with the maintenance of the existing structure.

The same point can be made with respect to the recruitment and selection of personnel. The primary concern is not how competent, but how committed the individual is to the values of the organization. Thus, no matter how competent, a candidate for a teaching appointment who openly expresses unorthodox views about the organization of education is not likely to be a successful candidate. Public school administrators, for example, would seem more prone to look for personnel who "fit the pattern," rather than for those who "shake things up."

The second aspect of economic rationality that leads in the direction of change is the conception of the good individual participant within the good, i.e., economically rational, organization. There will, of course, be variations associated with the functional place of the individual unit within the organization, but at a level above that, the good participant is conceived in universalistic-performance terms. That is, the good participant is conceived as an instrumentality to ends outside or beyond himself, and as oriented to active mastery of his situation in the achievement of ends which transcend his own interests. Put another way, this is a conception of the individual as rationally adapting means to ends; utilizing the best menas to achieve his ends, whatever those ends may be. If the individual's goal is to construct buildings, and if there are available techniques for acomplishing that end which are more efficient (in the technical sense) than other, then the rational individual will use them. From this point of view, it is "stupid" to use a hand saw when the same job can be done much more efficiently with a power driven saw. With this value paramount, the primary problem of improvement is inventing more efficient means of accomplishing ends.

The emphasis on technical efficiency is a paramount emphasis in American society, but it is subject to considerable variation by differing functional emphases in different sectors of the society. In the organization with goal-attainment primacy, for example, it is superseded, or at least modified, by an emphasis on contribution to collective goals, and in the organization with integrative primacy it is superseded by an emphasis on solidarity. In the organization with pattern-maintenance primacy, however, the desirable type of participant, at a level above functional differentiation, is conceived as committed to the implementation of the values ascribed to him by virtue of his status in the system. The value system of the organization defines the commitments assumed by its members, and the good participant implements those commitments without regard to the consequences of their implementation for the solidarity of the system, the attainment of organizational goals, or adaptation. This means that the good participant is neither the one who utilizes technically efficient procedures to attain his goals (who is most competent), the one who contributes the most toward the attainment of collective goals (who contributes the most to collective effectiveness), nor the one who contributes the most to system solidarity (who is the most loyal and cooperative), but is the one who contributes most to the maintenance of the organization's value commitments (expresses and implements most consistently the common value commitments). Thus, in the university, highest status goes not to executive and administrative personnel, but to professors who most consistently implement the commitment to the maintenance and creative modification of the cultural tradition. There are clear conflicts arising from the priorities assigned to commitments (teaching, or the transmission of the cultural tradition, vs. research, or the creative modifications of the cultural tradition), and there is a distinct tendency for the latter to be measured in terms of volume rather than creativity, but these are problems within the main pattern, not of the pattern itself. That is, both teaching and research are forms of implementing pattern-maintenance commitments. What is at stake is the assignment of priorities to competing commitments. In terms of prior discussion these are questions of organizational policy.

The primacy of pattern-maintenance values shows up again in universities where seemingly the proportion of participants who aspire to administrative positions is far smaller than in other organizations. Although the evidence is strictly anecdotal, it appears that relatively few university professors look upon an administrative assignment as an advancement. It is my impression that there are far fewer aspirants for administrative posts in universities than there are in business firms, governmental agencies, and certainly, public schools. For the university professor, the possibility of an administrative assignment is likely to be assessed in terms of the sacrifice entailed because of the time taken from the pursuit of scholarly and teaching interests. Administrative personnel may be viewed either as having little capacity for scholarly pursuits, or as being more interested in advancing their own careers than in engaging in solid scholarship. At best, they are often accused of expediency and watched carefully lest they prostitute the integrity of the organization for political reasons.

INTERNAL DIFFERENTIATION IN THE EDUCATIONAL ORGANIZATION

To this point we have been discussing organizational values, i.e., the normative standards applicable to the organization as a whole without regard for internal differentiation. What about internal differentiation? Here Parsons' approach is very clear. As in the case of societies, or more generally, any social system, the basic components from which organizations are composed are constant. Though organizations may differ in the degree to which components are differentiated from one another, it is always possible, at least analytically, to discrimate the same functionally differentiated units, or subsystems within an organization. Organizations differ not because the component parts differ, but because the component parts are organized differently to constitute a system. How are these component parts, which are presumed to be present in all organizations, differentiated from one another? And, how are they organized differently to constitute different types of systems? Let us take up the question of differentiation first.

The value system of an organization defines the commitments undertaken by assuming membership in the system, and legitimates the existence of differentiated roles. The role specifies expectations with respect to the ways in which the behavior of the differentiated unit will be different from that of other units which play roles complementary to it in the same interactive system. Legitimation of the role is permission granted, and obligations imposed, in accordance with the value pattern to behave differently from other units. These permissions and obligations to behave differently are legitimated on the ground that each differentiated unit contributes to the functioning of the system. Thus, the units are always differentiated from one another in terms of the functional imperatives. There will be, then, an adaptive unit, or subsystem (which may be a sub-collectivity, not necessarily an individual rol[illegible] goal-attainment unit, an integrative unit, and a pattern-maintenance [illegible] Each of these units will have a specialized function for the organization. They are, respectively, the facility maintenance and allocation, the policy implementation, coordination, and the technical operation functions. These are the goals, or primary outputs, of the four organizational subsystems.

Since the primary norms regulating interaction among units in goal-oriented organizations concern authority, and since authority specifies the rights and obligations to make decisions, in addition to having differentiated goals, the units will be differentiated from one another in terms of the types of decisions which they make legitimately. As outlined earlier, the four principal types of internal decisions concern (1) the maintenance and improvement of the pattern of allocation and organization necessary to provide an effective system of facilities for the performance of technical functions; (2) the implementation of policy commitments, i.e., the mobilization of resources in the interest of effective collective action; (3) the coordination of differentiated units, i.e,, the mobilization of support for policy decisions; and (4) the technical operations which implement directly the value commitments of the organization. Thus, within the organization, a certain unit will have not only the right, but also the obligation to make each of the four types of decisions. The criteria on which such decisions are made, however, differ from organization to organization. We shall return to this point below.

The Organization of Differentiated Units

Let us now turn to the question of how differentiated units are organized differently to constitute a system. In the first place the common value system of the organization gives ascendancy to the unit which directly incorporates the paramount value emphasis. This ascendancy is modified in organizations by the primacy of the organization's orientation to the attainment of a specific goal, but it is none the less clear. In the university, for example, the power and authority of the goal-attainment unit (executive and administrative officials) is severely restricted. Although there are wide variations among universities, decision-making rights are typically dispersed throughout the organization. Decisions that in other types of organizations would be the sole prerogative of managerial personnel are either made by technical personnel, or made by technical and managerial personnel acting as a collegial company of equals. In some universities administrative personnel cannot appoint personnel to academic positions without faculty approval. They cannot advance personnel in academic rank without faculty approval, and matters of curriculum and instruction are largely in the hands of faculty committees. These and other factors point to the ascendancy of the pattern-maintenance subsystem of the university, and the primacy of pattern-maintenance values for the university.

To take the contrasting extreme, the military organization gives clear primacy to goal-attainment values. Its primary concern is collective effectiveness. Internally this means that ascendancy goes to executive personnel, and patterns of decision making, career advancement, discipline, and technical operations follow clearly from that ascendancy. Pattern-maintenance, integrative, and adaptive concerns and units are clearly subordinated to goal-attainment. While the maintenance of commitments, the solidarity of the organization, and the provision of facilities are clearly essential to long-term success, the emphasis is unmistakably on the maximization of power through effective collective action, and the primacy of that emphasis legitimizes practices that would be considered intolerable elsewhere.

The public school is a less extreme case. As a consequence of two factors, the ascendancy of pattern-maintenance values is less clear in the public school than in the university. First, the aspect of the cultural tradition for which the public school is responsible is at a lower level of technical advancement than that for which the university is responsible. Second, the commitment to creative modification of the cultural tradition which characterizes the university is absent in the public school. Both these factors lead to less specialization and lower levels of technical competence on the part of operative personnel. Hence, there is less danger that administrative personnel will subvert the commitments of the organization. An alternative explanation may be found in differential ordering of priorities among functions. The secondary emphasis of the university seems to be on societal adaptation, i.e., the production of trained capacity. The secondary emphasis of the public school, however, may be on societal solidarity. This is a question that will have to be settled empirically.

VALUE SYSTEMS OF DIFFERENTIATED UNITS

The second respect in which organizational values organize the component parts differently may be identified by noting that each of the differentiated subsystems of the organization will have its own value system which is a conception of the good subsystem within the good organization of the relevant type. Thus, the conception of what constitutes a good facility maintenance subsystem in a business firm, a military unit, and an educational organization, will be quite different. The business firm's value emphasis on economic rationality will be reflected in the value systems of its four component subsystems. The military organization's value emphasis on effectiveness will be reflected in a similar way. In the business firm a primary criterion for all kinds of decisions, facility maintenance, policy implementation, coordination, and technical, will derive from the emphasis on economic rationality and solvency. In this case financial cost will be the primary criterion, where as in the case of the military organization cost is always a poor second to technical effectiveness. This seems to be the basis for a considerable amount of disagreement within the present day military establishment. From the military point of view, former Defense Secretary McNamara applied the wrong kind of standards in decisions concerning military hardware. The controversial TFX aircraft is a prominent example.

In the educational organization, however, the value emphasis is on the maintenance of the integrity of the institutionalized value pattern which defines the pattern of its units, independent of adaptive, goal-attainment, and integrative costs. Hence, internally, in the selection and allocation of facilities, the implementation of policies, and the coordination of units, the primary concern is maintaining the existing pattern. In deciding how to allocate resources within the organization, for example, a conceivable alternative is to eliminate certain offerings from the curriculum because they are too expensive. Although as Callahan (1962) notes there was a period in the history of American education when such standards were given considerable emphasis, it is far from characteristic of the educational organization. Only rarely does a school abandon a program that has been established for any length of time. In fact, a seemingly effective procedure sometimes adopted by administrators and trustees to pursuade reluctant voters to provide the desired level of financial support is to threaten serious cuts in the school program.

The same considerations apply in the context of organizational goal-attainment. The good goal-attainment subsystem will be conceived as one which mobilizes organizational resources in the interest of the implementation of policy commitments, but the primacy of pattern-maintenance values means that the desirable subsystem will operate within the basic value commitments. The parallel case on the societal level is Indian society. Here the function of the goal-attainment subsystem is the same as elsewhere, but the paramount societal commitment to the maintenance of the values ascribed to the society as a unit in a transcendental religious order means that the good government will function within the limitations imposed by that commitment. Thus, although a societal goal for India may be to reduce starvation and to raise the standard of living, the implementation of that policy by slaughtering cattle is out of the question.

The case is far less extreme, but the basic pattern is the same in the educational organization. A policy goal of the school may be to increase the level of education of "culturally deprived" groups, or to decrease the drop-out rate in a certain class of students. Although the goal may be shared widely as a legitimate one, the difficulty is in finding ways of implementing the goal that are consistent with the maintenance of the paramount value pattern.

A significant feature of the structure of all pattern maintenance units is that they exhibit something which approximates a caste system, and that status in the caste hierarchy is granted not on the basis of rational, technically efficient performance, but on the basis of the extent to which the unit acts in accordance with the values ascribed to it in its status in the system. Each unit has its "proper" place, or "station," and its primary obligation is to know its place and not to presume to rise above it, or sink below it. On the societal level, Indian society, and aristocracies are prominent examples.

The American value pattern precludes the possibility of statuses being permanently ascribed, and there is movement from station to station. Thus, in the university, personnel are expected to advance from instructor, to assistant professor, to associate professor, to full professor. Even here, however, advancement is not accorded on the basis of rational adaptation of means to ends, but on the basis of the extent to which the participant acts in accordance with the values ascribed to him.

The operations of the adaptive, goal-attainment, and integrative subsystems of organizations all imply change of some sort. The pattern-maintenance, or technical, operations, however, leave the system in its same patterned state. The value system of the technical subsystem calls for the maintenance and expression of the organizational value pattern, whatever that may be. In the adaptive organization with its emphasis on maximizing production at minimum cost, there is a "built in" provision for improvement. That is, the expression and implementation of the value pattern on the part of technical personnel insures improvement. Similarly, the mere expression and implementation of the military organization's commitment to effectiveness insures increasing levels of effectiveness, or improvement in the context of power.

In the pattern-maintenance organization, with its commitment to the maintenance of its value commitments, the expression and implementation of those commitments by the technical subsystem leads not to improvement in the customary sense, but, because the paramount value emphasis is on maintenance, to increasing stability. That is, if the paramount value emphasis is on the maintenance of commitments, and if the technical subsystem is the sector of the organization responsible for the expression and maintenance of that value emphasis, then it follows that improved technical performances will lead to enhanced ability on the part of the organization to maintain its value commitments, or to maintain its structural patterns.

Another way of putting this is to note that the most important consequence of increased levels of technical training for operative personnel in pattern-maintenance organizations is not, as one might expect, more rapid change, or improvement in the ordinary sense of greater control over, or responsiveness to, environmental changes, but greater organizational stability. Thus, increasing levels of technical training for public school teachers seems a doubtful way of "modernizing" educational practices. The higher the level of skill attained by teachers, the more the decision-making rights will accrue to them, and the less the right and ability of administrative personnel to make the organization responsive to environmental changes. If it were otherwise we should find that universities were in the front ranks of those organizations concerned about finding better ways to perform their functions.

Innovation in Education

The final aspect of educational organization that I shall treat in this monograph is that related to educational innovation. For reasons that need not detain us here, educational innovation, or rather the presumed lack of it, has attracted a considerable amount of attention in recent years. Although it is not at all clear what is meant, in any precise sense, by innovation, the general idea seems to be that schools take longer than is desirable to devise and adopt improved instructional and organizational procedures. In fact, although it would be surprising if it were not the case, there seems to be no incontrovertible evidence to indicate that educational practices change more slowly than practices in other areas. And, even though anecdotal evidence provides strong support for that contention, there is no evidence to indicate how much discrepancy there is between educational change and change in other areas.

At any rate, on the basis of anecdotal evidence, it is held that educational practices might be improved more rapidly than they have been. By improvement, those concerned about the problem seem to mean the invention and utilization of more technically efficient educational practices. For some persons the primary problem is the invention, or development of scientifically validated diagnostic and instructional practices. For others, who contend that practice is already far behind the best known techniques, the primary problem is one of devising ways to intervene in organizations to bring about the more rapid adoption of available improvements. The problem with this latter approach is that there is little agreement on what it is in educational organizations that, if changed, would yield the desired result.

On the basis of the preceding analysis, one would certainly expect educational organizations to exhibit greater stability than many other types of organizations. Beyond that, however, one would expect that the paramount problem of educational development is neither finding more rational means of teaching students, although this is certainly necessary, nor getting more "change agents" to tinker with educational organizations. The paramount problem, in terms of the present analysis, is resistence to changing the values and institutionalized norms which form the main structural framework of the educational organization.

INNOVATION AND VALUES

Earlier in this chapter we considered briefly the implications of organizational value systems for conceptions of the desirable individual participant, and for organizational stratification. Let us now consider that topic more fully in the context of "innovation." As a consequence of the societal value pattern, occupational roles in American society are defined primarily in universalistic achievement terms. As a norm governing performances, this calls for rational adaptation of action to the intrinsic features of the situation, i.e., the utilization of the best means of attaining the desired end in the sense of technical efficiency, whatever the end may be. Given such a norm, there are few approaches to doing things which can be taken for granted. The performer is, in effect, an applied scientist, utilizing knowledge of the situation to attain ends in the most expeditious manner possible. The rational individual masters his environment, tests patterns of action against universalistic standards, and abandons those which are least efficient. Custom and tradition are discounted as justifications for practices; nothing is sacred merely because it has become traditionally accepted and established.

The desirable kind of action, from this point of view, is conceived as an instrumentality to the attainment of ends sought in accordance with universalistic standards. In orienting to objects, whether they be persons, the actions of persons, new procedures, or potential courses of action, the pattern called for is an affectively neutral focus in the effects caused by specific properties of a class of objects. Rational adaptation of action to the realistic features of the situation requires a neutral assessment of objects (e.g., alternative ways of proceeding) in terms of their specifically relevant properties. The concern cannot encompass the object in its diffuse wholeness. Adaptation requires generalized prediction concerning the probable effects caused, or produced, by a class of objects. The relevant effects caused are not those in relation to the actor but independent of him and his wishes. However much he may desire or abhor certain effects in relation to himself, the manipulation of objects to cause certain effects requires a universalistic treatment of objects, i.e., a cognizance of their characteristics in relation to other objects, or as a class of objects.

Although characteristic of all occupational roles in American society to some degree, the norm of technical efficiency is institutionalized most firmly in the economic sector which directly incorporates the paramount societal value pattern. In the other three sectors of society it is softened considerably and modified by goal-attainment, integrative, and pattern-maintenance values.

The normative standards institutionalized in the goal-attainment sector of society have to do with the selection of goals, not the means of their attainment. They retain the emphasis on specificity and performance; the interest is still segmental and in what effects are caused. But goal-attainment involves intrinsically gratifying activity, hence affectivity and particularism are involved. The concern is for the effects produced in relation to the actor, or a relational system which includes him. Objects considered from this point of view are not alternative means to ends, but ends, or goals, in themselves. As a normative standard governing performances, it specifies the goals to which units are expected to contribute. The desirable kind of action, and by extension actor, is that which contributes to the attainment of system goals.

The third standard incorporates diffuseness and quality with particularism and affectivity. Objects are regarded in their diffuse wholeness, and in terms not of what effects they produce, but what qualities of attitude they express toward this relational system and its members. As a normative standard, the pattern defines expectations with respect to units' contributions to the maintenance of system solidarity. The desirable course of action, and by extension, actor, is that which contributes most to solidarity.

The fourth standard, which is the one of greatest concern here, is defined by diffuseness-neutrality, and universalism-quality. Objects are regarded neutrally in terms of their diffuse wholeness, and in terms of the quality of attitude expressed not toward members of the common relational system, but independent of that relation, i.e., universalistically. As a normative standard, the pattern defines expectations with respect to units' contributions to the maintenance of commitments assumed in their status as members of the system. The preferred act, and actor, is that which expresses the values ascribed to the unit in its status as a unit of the system. The emphasis is on the maintenance of the place of the unit in the pattern of the units in the system.

On a societal level, the pattern is illustrated most clearly by India. There the result is a rigid caste system in which the status of the unit is permanently ascribed, and in which the primary obligation of the unit is to act in accordance with his station. His action cannot be guided by considerations of technical efficiency, the attainment of system goals, or system integration. Salvation depends on the maintenance of commitments to act in accordance with the values ascribed to him in his universalistically defined place in the caste system.

Of the four standards outlined, the most important in the American occupational system is that emphasizing technical efficiency. As noted above, however, that emphasis is modified to a considerable degree in the non-economic sectors of society according to the functional place of the organization for society. Thus, in the goal-attainment organization there will be a strong emphasis on obligations to contribute to system goals; in the integrative organization there will be a strong emphasis on contributing to system solidarity; and in the pattern-maintenance organization there will be a strong emphasis on conformity with ascribed values. This, of course, does not apply equally to all roles within an organization. Executive roles will be skewed in the direction of the particularistic performance standard.

ASSESSMENT OF INNOVATIONS

The important point here is that the primary consideration involved in assessment of alternative procedures in the educational organization (both university and public school) is not technical efficiency, but consistency with the pattern of values ascribed to the unit in its status in the system. The important question concerning teaching machines, programmed instruction, instructional television, etc., is not what effects they produce in relation to specific educational goals, but the extent to which their adoption constitutes an expression of the value commitments assumed by the teacher in his status as a member of the system. In assessing an alternative instructional procedure, or device, educational personnel simply do not think in terms of the effects produced in relation to a specific objective independent of their own gratification. For the most part, educators do not even have highly specific objectives. They do not think in terms of very specific effects that they want to produce. When a physician prescribes a drug for a patient, *it is because there is a* *very specific effect that he wishes to produce for that specific patient.* In engaging in their activities, however, educators are concerned not about producing specific effects, but about their commitment to "profess" cultural patterns, i.e., to express diffuse qualities. As evidence of this, consider the "fact" (it is supported only by tentative, and mostly anecdotal, evidence) that instructional personnel of the educational organization are not evaluated on the basis of the effects they produce. They seem to be evaluated primarily on the basis of the extent to which they profess and exemplify the appropriate cognitive and evaluative cultural patterns. The evaluation forms typically used to rate public school teachers' performances seem to have few, if any, items that can be construed as evaluating effects of the teachers' behavior and a considerable number that have to do with the appropriateness of the teacher's conduct, dress, pleasantness of manner, rapport with students, cooperativeness, etc. It might be supposed that the emphasis on achievement testing is evidence to the contrary on this point. However, it would seem very safe to hypothesize that few teachers have ever been dismissed, failed to acquire tenure, or even been criticized severely, because their students fell below some norm on the achievement tests. If the teacher has been a good professor, i.e., has professed well, then he has fulfilled his responsibility. He cannot be held responsible for the inadequacies of students. If a student has ability and fails to learn, then the problem may be motivational, or emotional, but whatever it is, it is in the student. This orientation is probably more characteristic of university teaching than public school. In higher education the instructor takes little or no responsibility for the student's learning. His job is to profess; if the student does not learn, that is his own fault. That is, the instructor does not seek to produce specific effects and wonder what went wrong when those effects were not produced, but to exhibit a commitment to cultural patterns. The student, of course, is not expected to produce effects either, but to express his commitment to the relevant cultural patterns. Given such a normative standard it would be most surprising if educational practices did change rapidly.

CURRENT TRENDS IN EDUCATION

One current attempt to do something along these lines can be seen in the "clinical supervision" movement. Another seems to be the emphasis being placed, in some schools of education, on "behavior modification." Although the proponents of the former do not present it in these terms, the procedure can be characterized as follows. Given an instructional goal agreed upon by the teacher and the supervisor, the supervisor utilizes a set of descriptive categories to record in neutral terms, specific properties of the teacher's behavior. An assessment is then made on the basis of available research evidence of the extent to which the behavior of the teacher can be expected to cause the desired effect. If the teacher's objective is to increase students' abilities to work independently, and if there is available knowledge of the kinds of teacher behavior that yield that effect, then alternative behaviors can be assessed in terms of their efficiency with respect to the goal, and the most efficient alternative can be selected. The objective of proponents of "clinical supervision" seems to be to enable the teacher to rationally manipulate his own behavior in order to produce the desired effects. If the teacher has at his disposal a repertoire of behavioral alternatives, then he can select those which are most efficient with respect to a given goal in the same way that a mechanic selects the tool that enables him to achieve his goal in the most efficient manner. The tools of the teacher, however, are communicative tools, hence the rationalization of instructional practice will be primarily a matter of acquiring greater knowledge of, and control over, interpersonal and other forms of communication.

Another way of putting all this is to say that the minimum requirement for the invention of improved methods of doing things, or the adoption of already available improvements, is the interest in producing a specific effect. Without the interest in producing a specific effect one cannot know in any precise sense how well he did. In addition to the specific, desired effect, however, there is also required an interest in knowing how well one did, and in doing better if the performance is below some desirable level. The facts of the matter bear careful examination, but my own suspicion is that none of these requirements is met in the educational organization. Certainly educators do not characteristically seek to produce specific effects in relation to specific students. Although "individualized instruction" is a popular phrase in public education, it may have no more practical meaning than "the whole child." Moreover, educators do not seem, at least to me, to be concerned about how well they are doing, at least not unless things are drastically out of kilter. Educational failures are student failures, not instructor failures, or system failures. Both my own experience and the model being discussed here suggest that teachers, both public school and university, gauge their success in terms of the respect accorded them by students rather than by specific effects produced in students. The successful college teacher is the one whose classes are well attended by, and whose scholarly counsel is sought after by, serious students. Moreover, teachers seem, as the model suggests they would, to evaluate new instructional devices and procedures not in terms of the specific effects the devices and procedures can be utilized to produce, but in terms of how well they fit within the teacher's conception of good teaching.

The student role, of course, complements that of the teacher. Students view teachers as objects of more or less generalized respect, not as objects of utility, or resources, to be utilized to attain specific ends. In short, it seems to me that "the system" of the educational organization itself is the best explanation for the lack of change in education. If one were seriously interested in bringing about major changes in educational organizations, the way to begin would seem to be by getting all participants to identify the specific effects to be produced in specific students, and to assess the extent to which the participants performances did or did not produce those effects.

The difficult question, however, is whether, and how, one could bring about the focus on specific effects. The parallel of the educational case would seem not to be the farmer who adopts a new fertilizer because of the specific effect produced with respect to crop yield, but the craftsman who says, "That's fine, if you want increased production, but I'm more interested in a fine quality product." It is also difficult to conceive of the case in which the extent of agreement concerning which effects are desirable in education is anywhere near that which exists in agriculture, medicine, and other highly rationalized pursuits.

Although the conclusion drawn immediately above seems of considerable significance, the point to be emphasized here is that in this context commitment to act in accordance with the values ascribed to one in one's status means commitment to the utilization of a restricted set of communicative alternatives on value grounds alone, i.e., independent of their implications for teacher-student solidarity, the attainment of classroom goals, or the adaptation of teacher behavior to the intrinsic features of the instructional situation. In short, the availability of knowledge to the effect that certain communicative procedures produce certain learning effects does not insure that that knowledge will be utilized any more than the availability of efficient means of producing goods insures that those means will be utilized in India. Knowledge must not only be possessed, its utilization must be motivated. Without motivational commitment to its utilization, knowledge has little effect. This is the reason for suggesting that the invention of more efficient instructional methods is a necessary, but not sufficient, step in educational improvement.

CHAPTER 5

In Summary and Conclusion

Several persons who read pre-publication drafts of this monograph responded by saying, in effect, "It's interesting, but I don't know what to do with it. It doesn't make any difference in the way I think about organizations, or provide me with any research ideas." On the one hand, I must admit to being sorely perplexed by statements of this kind. Acquaintance with Parsonian ideas has not only had a great impact on my own thinking about organizations, but also provides a number of research ideas. On the other hand, I tend to forget how long it has taken me to "get inside" Parsons' framework, to acquire some facility in thinking in these terms. Moreover the insistent demands of graduate students for answers to questions has led to the identification of some of the theory's limitations. Nevertheless, it may also be that I have been less successful in presenting the ideas than I had hoped. Hence, one final attempt to indicate what it means to think in terms of the framework may be appropriate.

Galenter and Gerstenhaber have put it, "Imaginal thinking is neither more or less than constructing an image [or model] of the environment [in this case, organization,] running the model faster than the environment, and predicting that the environment will behave as the model does. . . . " (Galenter and Gerstenhaber, 1956, p. 219) It may also involve the construction of a model of one environment and, on the basis of partial information concerning a new environmental situation, predicting that unexamined aspects of the new environmental situation will appear as the model does.

Parsons' model of organizations is a complex affair, and part of the difficulty experienced by those who attempt to use it may be a simple matter of them not being sufficiently well acquainted with the model. The use of such a model involves its manipulation under various hypothetical conditions and constraints, the observation of the outcome of these manipulations, and the projection of these outcomes onto the environment as predictions. Clearly, if one does not know how to manipulate, or to "run," the model, he can do none of these things and indeed does not know what to do with it. Although my own view is that there is no substitute for hard work in developing an acquaintance with the model (there are those who hold that the pay-off does not warrant the work, but how they arrive at that conclusion without having done the work, I do not know), it may be worthwhile to indicate briefly what can be done with it.

The Parsonian Model

A highly condensed version of the Parsonian model of organizations might be presented as follows. In the model the organization is confronted by the necessity of achieving some level of solution to four functional imperatives in order to maintain its existence. The model organization is characterized by a value system which establishes an order of priority among the four functional imperatives. There are twenty-four possible arrangements of the four problems: hence there are an equal number of possible value patterns. Externally, the value pattern determines the nature of the organization's goal, i.e., its output, the terms under which that output is made available to recipients, the means by which the organization secures the resources essential to the attainment of its goal, and the conditions under which it will be integrated into, and supported by, the environing systems.

Whatever the nature of the value pattern, structural units within the organization are differentiated from one another along functional lines. That is to say, units will tend to specialize in terms of their contribution to the functioning of the organization. Each functionally specialized unit has functionally differentiated output, is subject to functionally differentiated norms, and utilizes a functionally differentiated symbolic medium. The relative positions of the differentiated units in terms of capacity to influence the outcome of organizational processes is a function of the value pattern. The unit specializing in that function to which the value pattern gives highest priority has the greatest capacity to influence outcomes, etc.

The norms regulating relations among units within the organization differ as a function of the value pattern. Thus, while all organizations have specialized norms governing the adaptive unit, the norms governing such a unit in an organization the value pattern of which accords highest priority to integration, are different from the norms governing the adaptive unit in an organization, the values of which accord highest priority to pattern-maintenance.

Each of the functionally specialized structural units consists of four sub-units differentiated from one another in terms of the function performed for the unit as a whole. That is, in the attainment of its goal the unit makes a specialized contribution to the functioning of the organization. But the unit itself is a system in its own right, is subject to the four functional imperatives, and hence consists of four functionally differentiated sub-units. There are then, four primary organizational units, each consisting of four sub-units. With the exception of the four pattern-maintenance sub-units, these sub-units engage in processes of interchange with one another. Each of the sub-units of a given primary unit engages in exchange with a particular sub-unit of another primary unit, e.g., between the goal-attainment sub-unit of the goal-attainment primary unit and the goal-attainment sub-unit of the integrative primary unit there occurs an exchange of policy decisions for political support. These exchanges tend toward a state of equilibrium such that an increase or decrease in the output of one party to an exchange will be followed by action of the other party to re-establish a state of equilibrium, either by increasing or decreasing its output, or by attempting to restore the output of the other party to the previous level.

RUNNING THE MODEL

Recognizing that this is a greatly simplified version of the model, the question is, "Can we run the model faster than the environment, observe what happens in the model, and project the outcomes in the model onto the environment as predictions?" Although the predictions are quite crude and there are limitations, it seems apparent to me that we can do exactly that. We can imagine an organization with a particular value pattern, with the particular procurement, disposal, and integrative mechanisms specified by that pattern, with functionally differentiated units producing functionally differentiated outputs, regulated by functionally differentiated norms, utilizing functionally differentiated symbolic media, and having a relative standing in terms of capacity to influence organizational processes, all in accordance with the value pattern. We can further imagine a change in the value pattern, a re-ordering of the priorities assigned to the four functional imperatives, and observe the outcomes of such a change in other parts of the model organization. Given a particular change in the value pattern, we would be able to observe, at least in a rough way, the outcomes in terms of the components of the model outlined above, e.g., procurement, disposal, and integrative patterns, norms, etc. At this point I encounter an important limitation. Whether it is a limitation due to the state of development of the theory, or of my understanding, is not clear, but it seems that prediction of the consequences of changes of value patterns are limited to first order changes. That is, the consequences of a change in the primary value emphasis, e.g., adaptation to goal-attainment, are far more clear than the consequences of a change in, say, the secondary emphasis. There appears to be little basis for predicting what would happen if the value pattern of an organization giving first priority to adaptation and second priority to goal-attainment changed to a primary emphasis on adaptation and a secondary emphasis on pattern-maintenance.

As for the projection of these outcomes onto the environment, i.e., onto concrete, empirical organizations, we immediately encounter a major difficulty. Organizations do not appear to change greatly over time in respects relevant to the model. This is not an insurmountable difficulty; we can, and do, adopt an alternate strategy. Instead of either manipulating the relevant organizational variables, or waiting until a change occurs naturally, and then seeing whether or not our predictions are confirmed, we look for several organizations which differ in the relevant respects and test our predictions against the occurrence or nonoccurrence of differences between other aspects of the several organizations. In effect we say, "Since organizations change rather slowly, and since we cannot manipulate organizational value patterns, we will treat organization A, which has value pattern x, and organization B, which has value pattern y, as one and the same organization which has undergone a change of value pattern from x to y. Since the model suggests that a change from x to y should be accompanied by further changes in procurement, disposal, norms, etc., we predict that organizations A and B will differ in the specified ways. A considerable amount of the material presented in CHAPTERS 3 and 4 follows this pattern.

Certainly the ultimate test of a model is the extent to which it permits one to generate predictions which can be supported by evidence. But it is not the only test. Models are constructed to represent what we already know as well as to suggest new kinds of knowledge to be sought. A preliminary test of a theorist's work is provided by an examination of the extent to which the model accords with, and explains, existing knowledge. It is my view that the analyses undertaken in the preceding chapters have demonstrated more than adequately the classificatory, descriptive, explanatory and hueristic utility of the Parsonian model. Classifying organizations according to the order of priority accorded to the four value patterns yields a taxonomy of 24 organization types. In our discussion we used only the four first order types to demonstrate the extent to which classification in these terms conveyed descriptive information about other characteristics of the organization, e.g., how it procures resources, disposes of its product, etc. A great deal more empirical work needs to be done in this area, first to identify other characteristics associated with class membership, and second to assess the extent to which the classification scheme can adequately handle its subject matter. A third avenue of needed exploration is in the systematic working out, in logical terms, of the characteristics of the second and third order organization types, and the search for their empirical counter-parts. In effect, the Parsonian treatment would lead one to expect to find 24 different types of organizations. The question is, can they be identified empirically and do they exhibit the properties prdicted by the model?

EMPIRICAL HYPOTHESES

Although treated much less systematically in the discussion, classification on a first-order basis was also shown, on the basis of anecdotal evidence, to be associated with a number of internal characteristics of organizations, e.g., the distribution of power. A good deal of careful work is needed in this area to assess the extent to which class membership is associated with other internal characteristics.

Although leaving a great deal to be desired in terms of logical rigor, the model has been utilized throughout the discussion of organizations to generate a number of specific suggestions about what we should expect to find if we direct our attention to certain areas, or if we perform certain operations. Certainly, much of the material presented in CHAPTERS 3 and 4 must be regarded as hypotheses. Although a complete listing of these hypotheses would amount to a summary of the two chapters, it may be worthwhile to identify several of what are, to me, the most interesting.

Perhaps the most general hypothesis that can be advanced concerning organizations is that the Parsonian scheme provides an exhaustive classification for empirically identifiable organizations. Following that, it can be further hypothesized that each type of organization will be characterized by a different rank ordering of the four basic value patterns, that each will be characterized by its own primary mode of procuring resources, disposing of its product, seeing to its integration into the community, and legitimating its operation. Each will be characterized by a different goal, be subject to different norms, and utilize a symbolic medium to a greater extent than others, will utilize a different value principle in choosing among alternative courses of action. The business firm will evaluate objects in terms of their contribution to utility, the governmental in terms of their contribution to effectiveness, the interest group, or political party, in terms of their contribution to solidarity, and the educational organization in terms of their contribution to generalized respect. Again, each type of organization will utilize a different standard in assessing the adequacy of its utilization of media. The criterion of successful utilization of money for the business firm is solvency; that for the successful use of power, for the governmental agency, sovereignty; that for successful use of influence, for the political party, consensus; and that for successful use of generalized commitments, for the educational organization, pattern-consistency.

It may also be hypothesized that any organization will tend toward structural differentiation in accordance with the four functional problems. By definition, this hypothesis entails further that each functionally differentiated unit, or subsystem, will be characterized by a functionally differentiated goal, will be subject to functionally differentiated norms, will tend to utilize a functionally differentiated symbolic medium, will be characterized by a value system differentiated from the organizational value system in the direction of its function, and will utilize a different criterion in selecting from among decision alternatives and measuring their success.

In relation to the other subsystems of a given organization, the technical subsystem will exhibit the greatest resistance to change and the slowest rate of change, followed in order by the coordinative, policy, and procurement subsystems. Of all the subsystems in all types of organizations the slowest to change will be the technical, or pattern-maintenance, subsystem of the pattern-maintenance organization.

The general notions of essential variables and homeostatic processes lead directly to the hypothesis that changes in the values of the essential variables (pattern-maintenance, integration, goal-attainment, and adaptation) will be set in operation opposing mechanisms which tend to keep the values of the essential variables within limits. In the warm-blooded organism there are a number of mechanisms which operate to oppose any tendency of the body temperature to exceed critical limits. Whether there are analogous mechanisms in organizations which operate to oppose any tendency of, say the value on the pattern-maintenance dimension, to exceed determinate upper and lower limits, and if there are, what they are is a question to be answered empirically. Carlson's (1965) findings concerning the practices devised by teachers to limit the impact of programmed instruction on student progress are suggestive in this regard.

There is a considerable number of relatively specific hypotheses that might be advanced concerning differences in values, norms, goals, evaluative standards, and standards of successful performance characterizing each of the differentiated subsystems within organizations, but to list them here would be highly repetitious. Perhaps it will be sufficient to point out that, according to the Parsonian model, we should find it possible to differentiate not just an administrative and a technical orientation, but four distinguishable orientations. That is to say, we should find it possible to distinguish, on any given level of analyses, four different ways of seeing things, and the corresponding categories of expectations, and communication. It does not necessarily follow, however, that each of these will be attributable to different concrete persons. A given concrete individual may "see" things in one context a way that is predictably different from the way the same individual sees the same things in a different context.

The final hypothesis I shall mention is this: from the assumption that social behavior is regulated by complementary, institutionalized, sanction-bearing expectations, follows the hypothesis that in order to succeed, attempts to change social behavior will have to focus on the interactive system, not on isolated individuals. Thus, if one wished to change the pattern of behavior of teachers, then success will be determined, at least in part, by the extent to which the expectations of complementary roles, and the sanctions supporting them, are changed. This, in turn, depends directly on changing the way actors "see" objects. As Parsons would put it, change in a system of action is a function of change in the meaning of objects.

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